



# L'influence des politiques de réglementation du tabac au sein des écoles sur le tabagisme chez les jeunes : résultats du projet SILNE-R

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Adolescents: public vulnérable

1 jeune sur 5 rapportait  
fumer en Europe en 2015

Mise en place de politiques  
de contrôle du tabac



Politiques de réglementation  
du tabac dans les écoles

Incohérences quant à l'efficacité  
de ces politiques

# BUT DE L'ÉTUDE

Évaluer le **changement dans les politiques de réglementation du tabac à l'école** et analyser leur **impact sur la consommation tabagique des adolescents**  
+ Quelques résultats du projet SILNE-R

# MÉTHODE

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✓ Basé sur les données des projets SILNE et SILNE-R

✓ **6 villes de 6 pays européens**



✓ **38 écoles en 2013 et 2016**

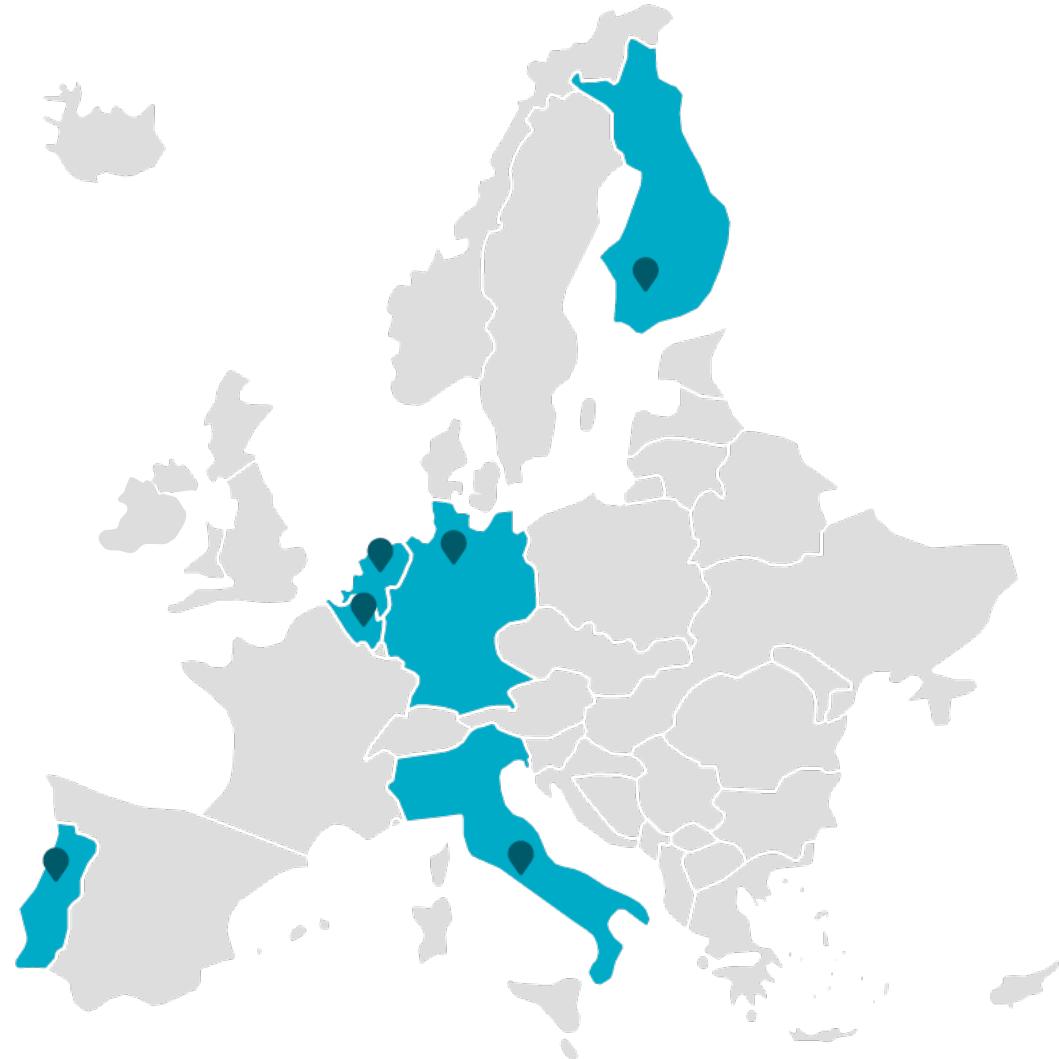
✓ **18 502 élèves (3<sup>e</sup> - 4<sup>e</sup> année secondaire)**

**439 membres du personnel scolaire**

✓ Score de politique scolaire :

Globalité, application et communication

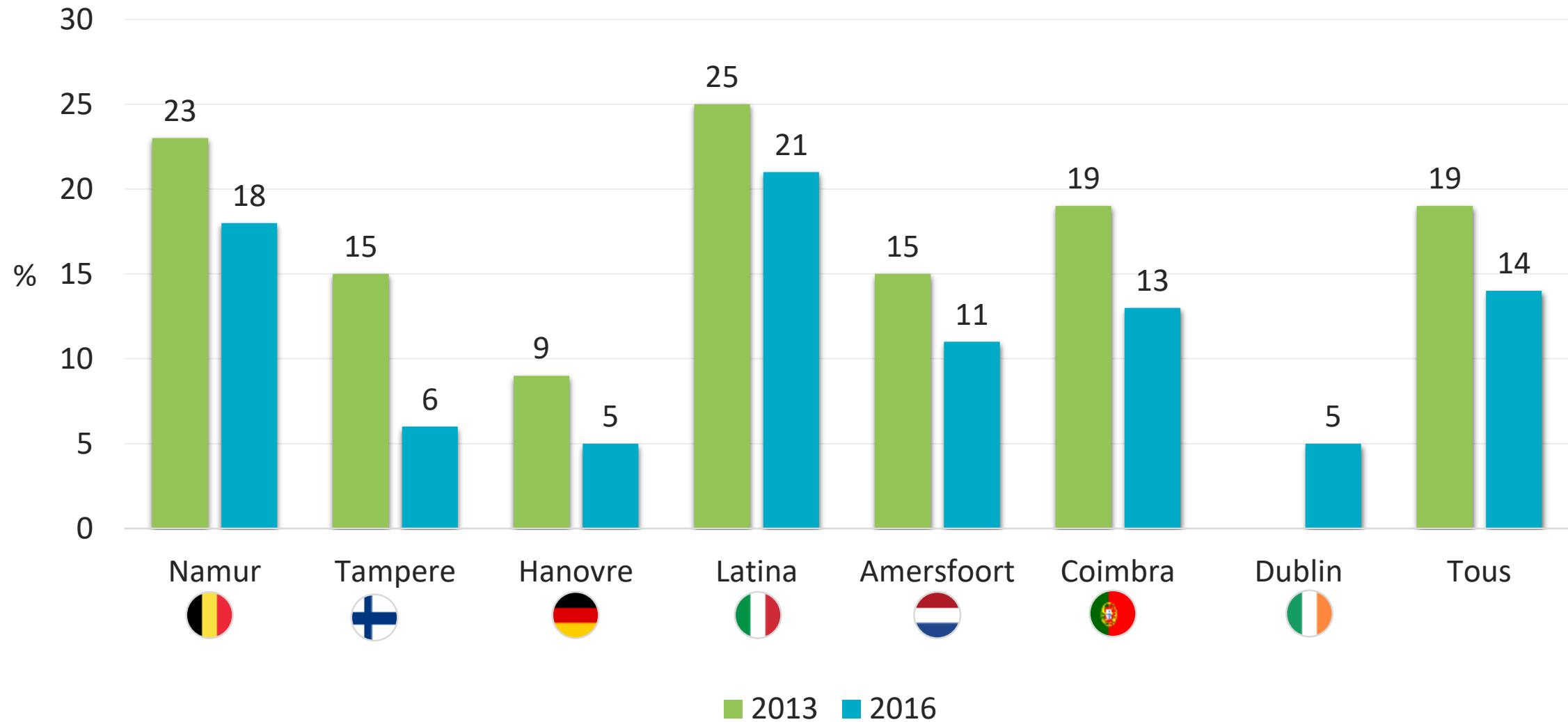
Perceptions des élèves et du personnel





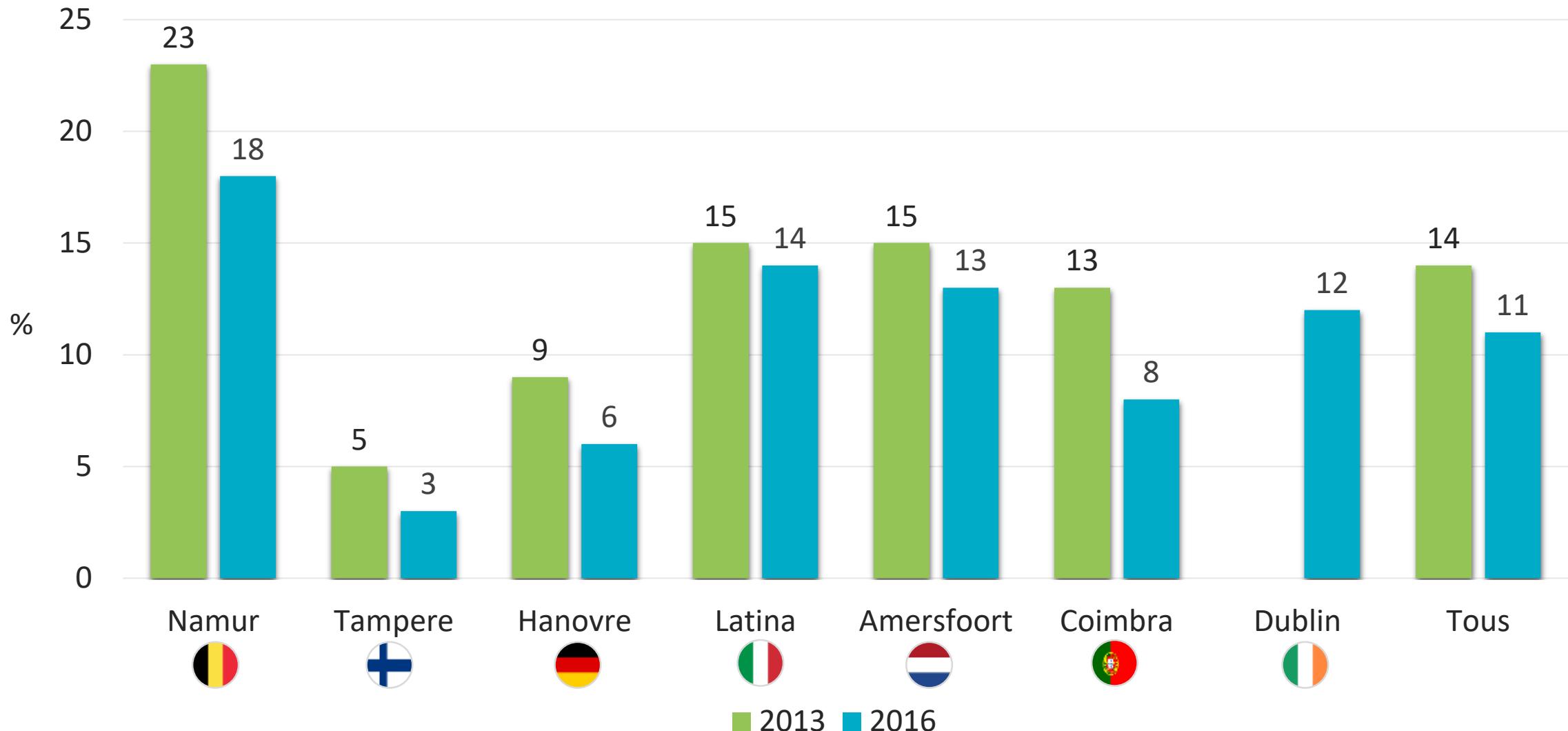
# RÉSULTATS

## Fumeurs hebdomadaires (%), SILNE-R, 2013-2016

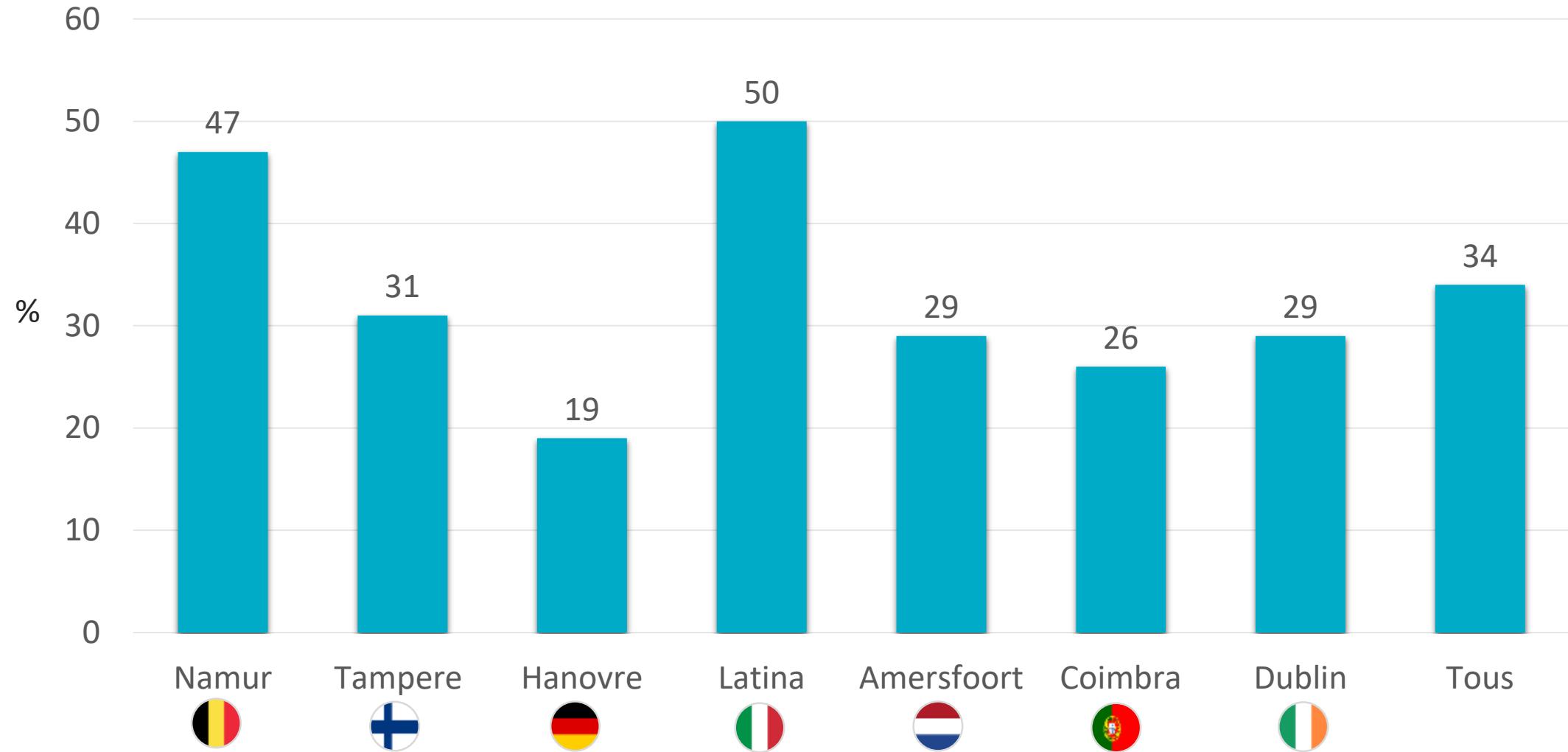


## RÉSULTATS II

### Expérimentation du cannabis (%), SILNE-R, 2013-2016

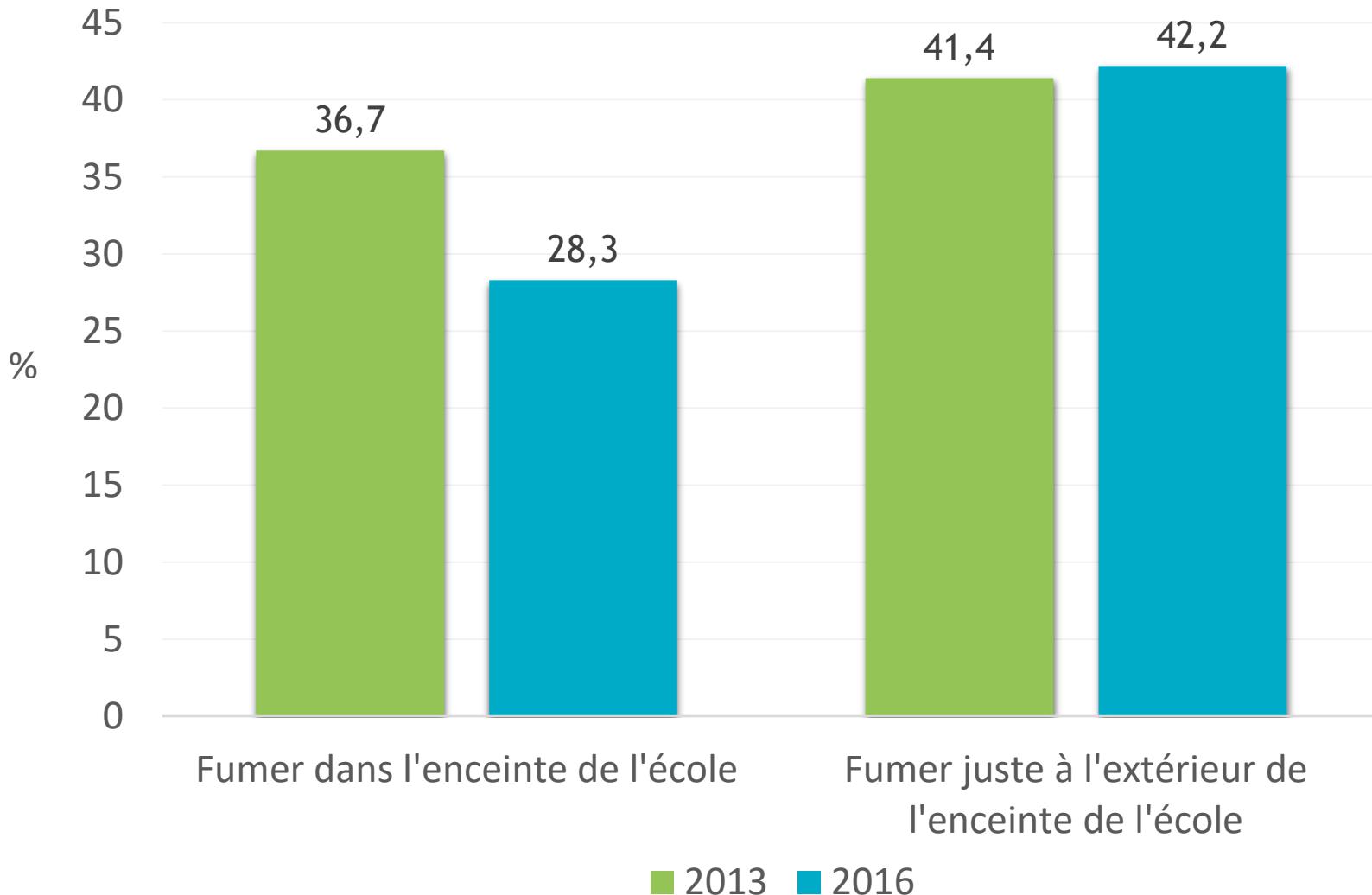


## Expérimentation de la cigarette électronique (%), SILNE-R, 2016



## RÉSULTATS IV

Comportements tabagiques parmi les fumeurs en 2013 (n=9,305) et 2016 (n=9,197), normalisé selon l'âge, SILNE-R

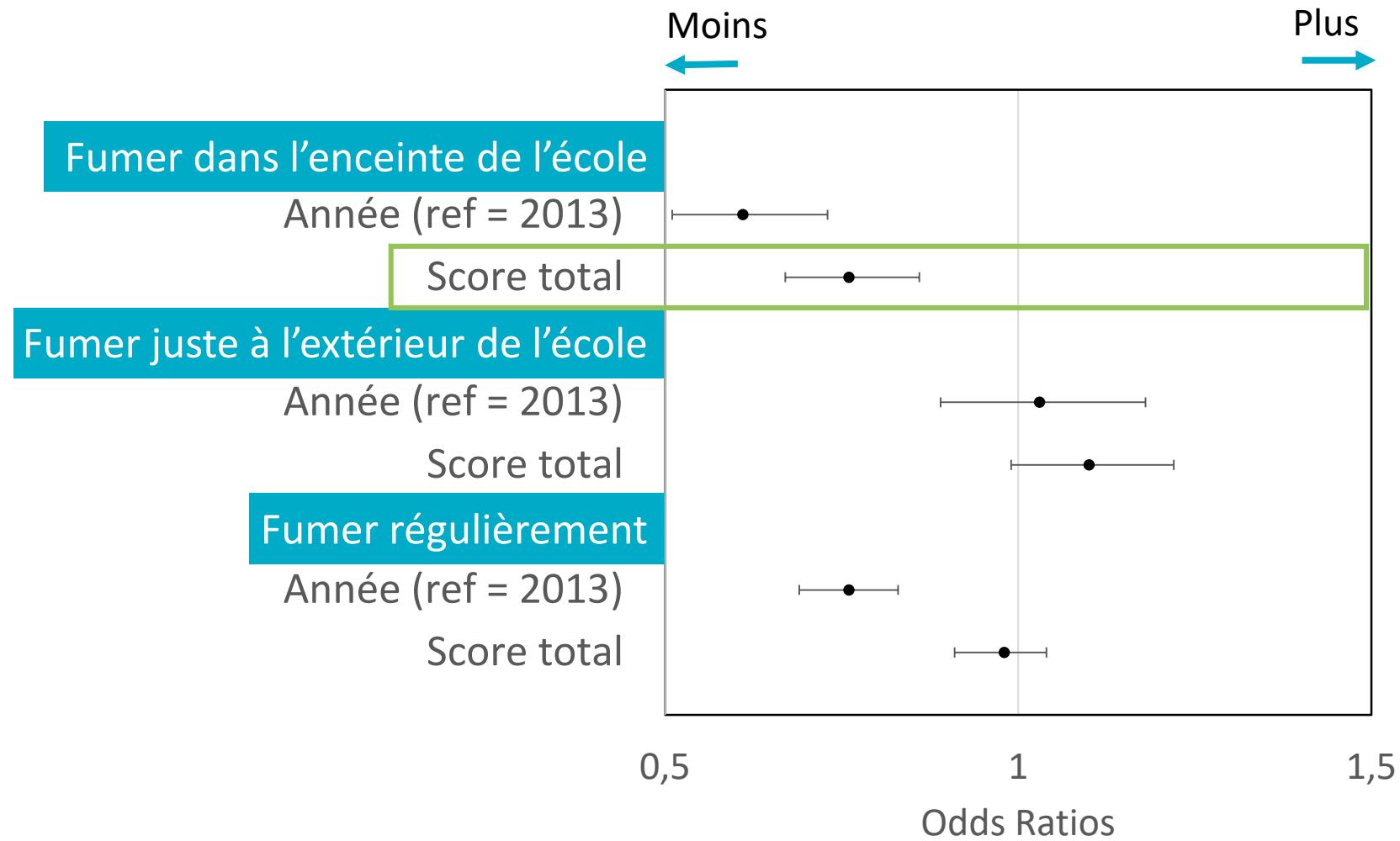


## Evolution des politiques de réglementation de tabac à l'école, SILNE-R, 2013–2016

<b>Dimensions</b>	<b>Scores (0–10)</b>	
	<b>2013</b>	<b>2016</b>
<b>Perception du personnel</b>	6,1 (1,1)	= 6,1 (1,1)
<b>Globalité</b>	7,6 (1,5)	↗ 7,8 (1,4)
<b>Application</b>	4,9 (2,1)	↘ 4,3 (1,8)
<b>Communication</b>	5,9 (1,5)	↗ 6,3 (1,2)
<b>Perception des élèves</b>	5,9 (2,0)	↗ 6,2 (2,4)
<b>Globalité</b>	7,9 (1,8)	↗ 8,0 (2,5)
<b>Application</b>	3,8 (2,6)	↗ 4,3 (2,9)
<b>Score total de réglementation</b>	6,0 (1,3)	↗ 6,1 (1,5)

# Comportements tabagiques en fonction des politiques de réglementation du tabac, régressions logistiques multiniveaux: SILNE-R, 2013–2016

Score total de  
politique de  
réglementation



# CONCLUSIONS

- Forte politique de réglementation du tabac à l'école → moins tendance à fumer dans l'enceinte de l'école
- Forte sévérité perçue par les élèves → moins tendance à fumer dans l'enceinte de l'école  
→ **Importance d'une application stricte**
- Forte politique de réglementation du tabac à l'école ✗ moins tendance à fumer juste à l'extérieur de l'école  
Pas d'impact sur l'entrée et les alentours de l'école! Maintien de la visibilité du tabagisme!  
→ **Recommandation d'étendre les réglementations de tabagisme aux alentours de l'école**
- Forte politique de réglementation du tabac à l'école ✗ moins tendance à fumer régulièrement  
**Pas de réel impact des réglementations scolaires de tabac en dehors du contexte scolaire.**  
Ces réglementations doivent faire partie d'une stratégie plus large de réduction du tabagisme
- Scores très faibles pour l'application de la règle - sanctions  
→ Promouvoir des stratégies d'éducation et d'assistance en plus des sanctions de type disciplinaires

# Merci pour votre attention!

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# Questions & Discussion



# References

- Kraus L, Guttormsson U, Leifman H, Arpa S, & Molinaro S. (2016). ESPAD Report 2015: Results from the European School Survey Project on Alcohol and Other Drugs: European Monitoring Centre for Drugs and Drug Addiction.
- Coppo A, Galanti MR, Giordano L, et al. School policies for preventing smoking among young people. *Cochrane Database Syst Rev*. 2014;(10).
- Galanti MR, Coppo A, Jonsson E, Bremberg S, Faggiano F. Anti-tobacco policy in schools: upcoming preventive strategy or prevention myth? A review of 31 studies. *Tob Control*. 2013;23(4):295-301.
- Azagba S, Kennedy RD, Baskerville NB. Smoke-free school policy and exposure to secondhand smoke: a quasi-experimental analysis. *Nicotine Tob Res*. 2015;18(2):170-176.
- Cole AG, Qian W, Leatherdale ST. Changing the Smoking Trajectory: Evaluating the Impact of School-Based Tobacco Interventions on Changes to Susceptibility to Future Smoking. *Int J Environ Res Public Health*. 2017;14(10):1182.
- Lipperman-Kreda S, Paschall MJ, Grube JW. Perceived enforcement of school tobacco policy and adolescents' cigarette smoking. *Prev Med*. 2009;48(6):562-566.
- Rozema A, Hiemstra M, Mathijssen J, Jansen M, van Oers H. Impact of an Outdoor Smoking Ban at Secondary Schools on Cigarettes, E-Cigarettes and Water Pipe Use among Adolescents: An 18-Month Follow-Up. *Int J Environ Res Public Health*. 2018;15(2):205.
- Griesbach D, Inchley J, Currie C. More than words? The status and impact of smoking policies in Scottish schools. *Health Promot Int*. 2002;17(1):31-41.
- Hamilton G, Cross D, Lower T, Resnicow K, Williams P. School policy: what helps to reduce teenage smoking? *Nicotine Tob Res*. 2003;5(4):507-513.
- Huang H-L, Chen F-L, Hsu C-C, et al. A multilevel-based study of school policy for tobacco control in relation to cigarette smoking among children in elementary schools: gender differences. *Health Educ Res*. 2010;25(3):451-463.
- Moore L, Roberts C, Tudor-Smith C. School smoking policies and smoking prevalence among adolescents: multilevel analysis of cross-sectional data from Wales. *Tob Control*. 2001;10(2):117-123.
- Kumar R, O'Malley PM, Johnston LD. School tobacco control policies related to students' smoking and attitudes toward smoking: national survey results, 1999-2000. *Health Educ Behav*. 2005;32(6):780-794.
- Lovato CY, Pullman AW, Halpin P, et al. The Influence of School Policies on Smoking Prevalence Among Students in Grades 5-9, Canada, 2004-2005. *Prev Chronic Dis*. 2010;7(6):A129.
- Evans-Whipp TJ, Bond L, Ukoumunne OC, Toumbourou JW, Catalano RF. The impact of school tobacco policies on student smoking in Washington State, United States and Victoria, Australia. *Int J Environ Res Public Health*. 2010;7(3):698-710.
- Piontek D, Buehler A, Donath C, et al. School context variables and students' smoking. *Eur Addict Res*. 2008;14(1):53-60.
- Kuipers MA, de Korte R, Soto VE, et al. School smoking policies and educational inequalities in smoking behaviour of adolescents aged 14-17 years in Europe. *J Epidemiol Community Health*. 2016;70(2):132-139.
- Lovato CY, Sabiston C, Hadd V, Nykiforuk C, Campbell H. The impact of school smoking policies and student perceptions of enforcement on school smoking prevalence and location of smoking. *Health Educ Res*. 2006;22(6):782-793.
- Leatherdale ST, Cole A. Examining the impact of changes in school tobacco control policies and programs on current smoking and susceptibility to future smoking among youth in the first two years of the COMPASS study: looking back to move forward. *Tob Induc Dis*. 2015;13(1):8.
- Adams ML, Jason LA, Pokorny S, Hunt Y. The relationship between school policies and youth tobacco use. *J Sch Health*. 2009;79(1):17-23.
- Barnett TA, Gauvin L, Lambert M, et al. The influence of school smoking policies on student tobacco use. *Arch Pediatr Adolesc Med*. 2007;161(9):842-848.
- Boris NW, Johnson CC, Huang S, et al. Targeting school tobacco policy: lessons from the Acadiana Coalition of Teens against Tobacco (ACTT). *Health Promot Pract*. 2009;10(4):549-556.
- Sabiston CM, Lovato CY, Ahmed R, et al. School smoking policy characteristics and individual perceptions of the school tobacco context: are they linked to students' smoking status? *J Youth Adolesc*. 2009;38(10):1374-1387.
- Lorant V, Soto VE, Alves J, et al. Smoking in school-aged adolescents: design of a social network survey in six European countries. *BMC Res Notes*. 2015;8(1):91.
- Joossens L, Raw M. The Tobacco Control Scale: a new scale to measure country activity. *Tob Control*. 2006;15(3):247-253.
- Joossens L, Raw M. *The Tobacco Control Scale 2016 in Europe*. Brussels: Association of European Cancer Leagues; 2017.
- Fallin A, Roditis M, Glantz SA. Association of campus tobacco policies with secondhand smoke exposure, intention to smoke on campus, and attitudes about outdoor smoking restrictions. *Am J Public Health*. 2015;105(6):1098-1100.
- Lee JG, Ranney LM, Goldstein AO. Cigarette butts near building entrances: what is the impact of smoke-free college campus policies? *Tob Control*. 2011;tobaccocontrol-2011-050152.
- Baillie LE, Lovato CY, Taylor E, Rutherford MB, Smith M. The pit and the pendulum: the impact on teen smokers of including a designated smoking area in school tobacco control policy. *Health Educ Res*. 2008;23(6):1008-1015.
- Pentz MA, Brannon BR, Charlin VL, et al. The power of policy: the relationship of smoking policy to adolescent smoking. *Am J Public Health*. 1989;79(7):857-862.
- Schreuders M, Nuyts PAW, van den Putte B, Kunst AE. Understanding the impact of school tobacco policies on adolescent smoking behaviour: A realist review. *Soc Sci Med*. 2017;183:19-27.
- Soteriades ES, DiFranza JR, Savageau JA, Nicolaou M. Symptoms of Nicotine Dependence and Other Predictors of Student Smoking at School: Implications for School Smoking Policy. *J Sch Health*. 2003;73(4):154-158.
- Murnaghan D, Leatherdale S, Sihvonen M, Kekki P. School-based tobacco-control programming and student smoking behaviour. *Chronic Dis Can*. 2009;29(4):169-177.
- Goodman E, Adler NE, Kawachi I, et al. Adolescents Perceptions of Social Status: Development and Evaluation of a New Indicator. *Pediatrics*. 2001;108(2):e31-e31.

# Merci pour votre attention!

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# **Backup slides**

✓ Dimensions des réglementations de tabac à l'école pour les élèves et le personnel scolaire

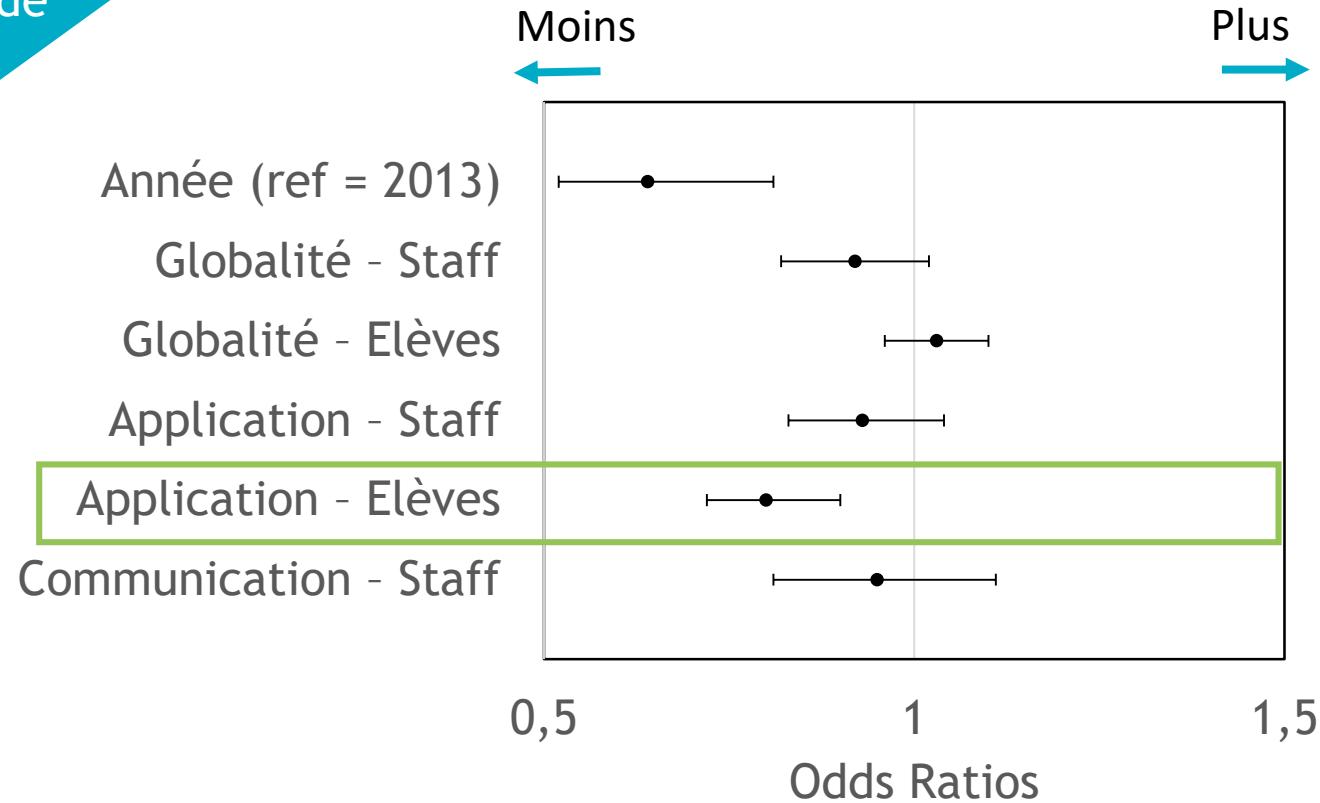
Dimensions	Perception du personnel	Perception des élèves
Globalité	Globalité de la règle	Existence de la règle
Application	Sanctions	Sévérité de la règle
Communication	Communication aux élèves Information aux autres	-

✓ Score total de réglementation de tabac à l'école

✓ Comportements tabagiques étudiés:

- Fumer dans l'enceinte scolaire
- Fumer juste à l'extérieur de l'enceinte scolaire
- Fumer régulièrement (au moins une cigarette par semaine)

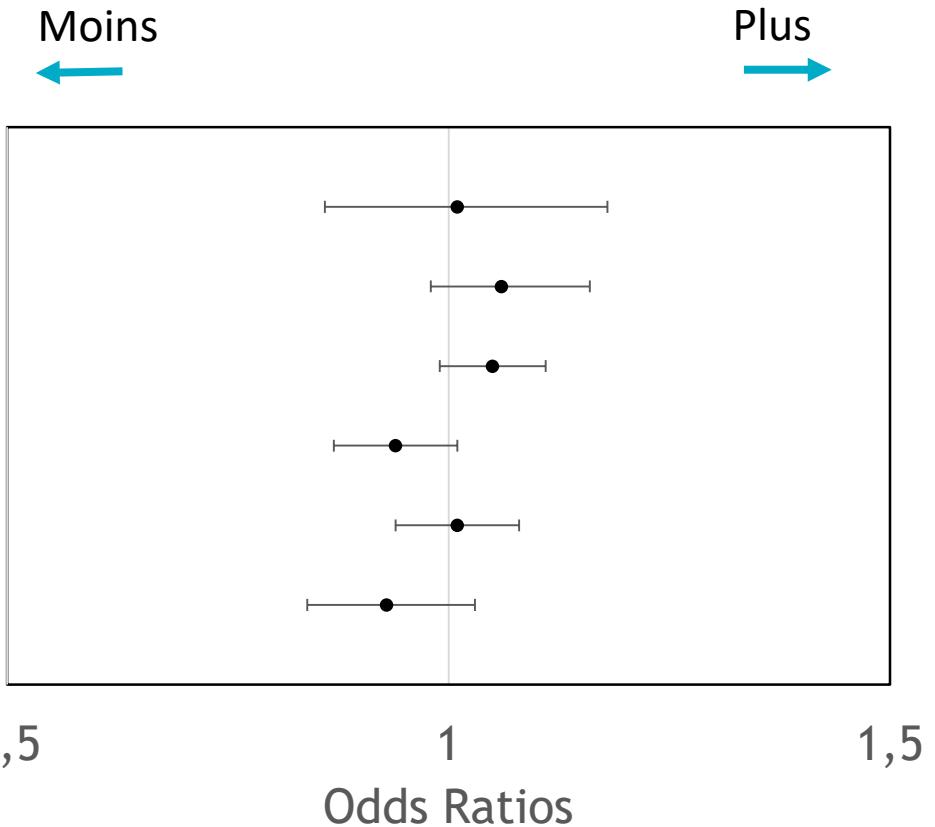
## Fumer dans l'enceinte de l'école



Année et dimensions incluses simultanément, école en effet random, contrôlé pour les variables confondantes (âge, sexe, statut socio-économique, habitudes tabagiques de la famille, habitudes tabagiques à la maison)

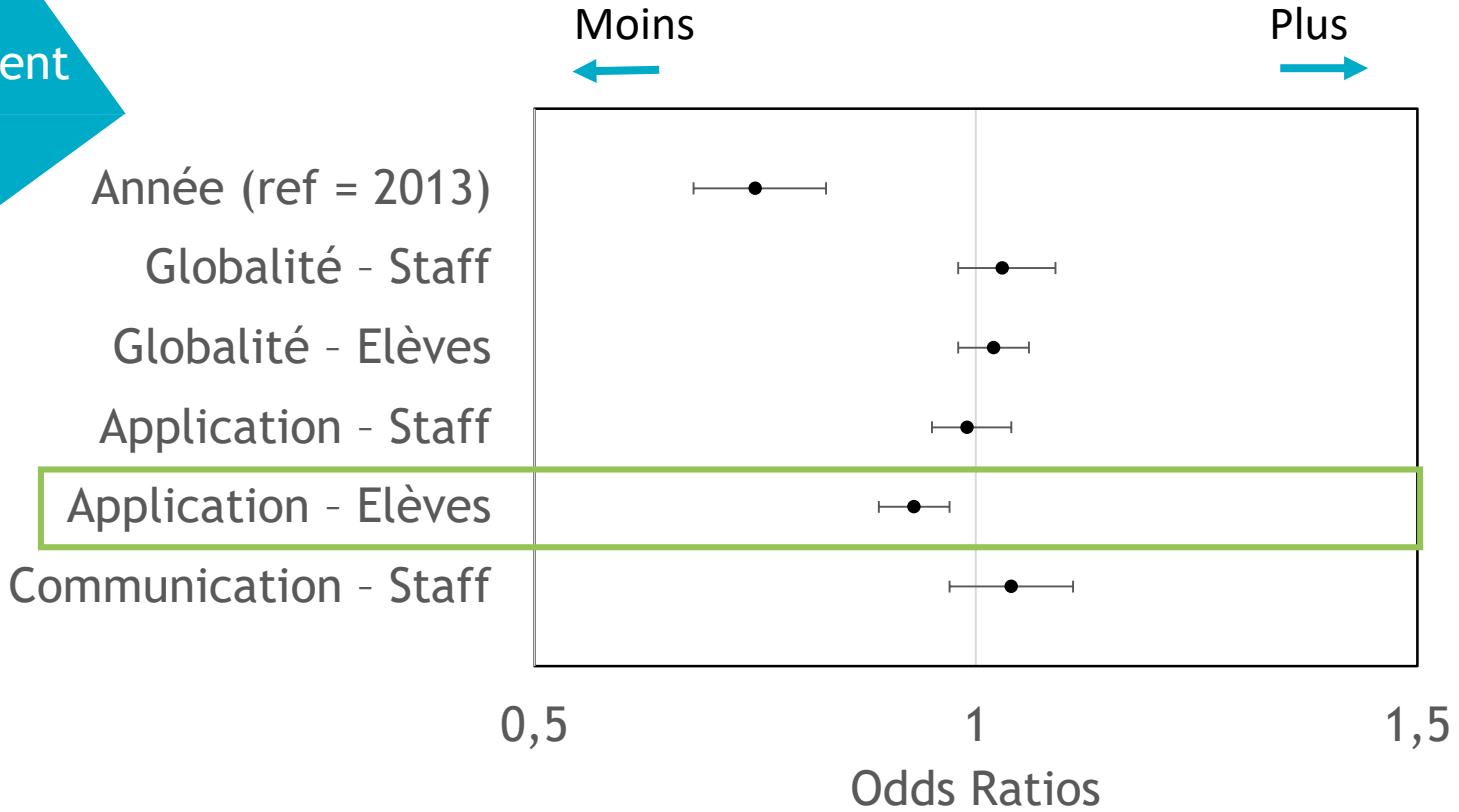
## Fumer juste à l'extérieur de l'enceinte de l'école

Année (ref = 2013)  
 Globalité - Staff  
 Globalité - Elèves  
 Application - Staff  
 Application - Elèves  
 Communication - Staff

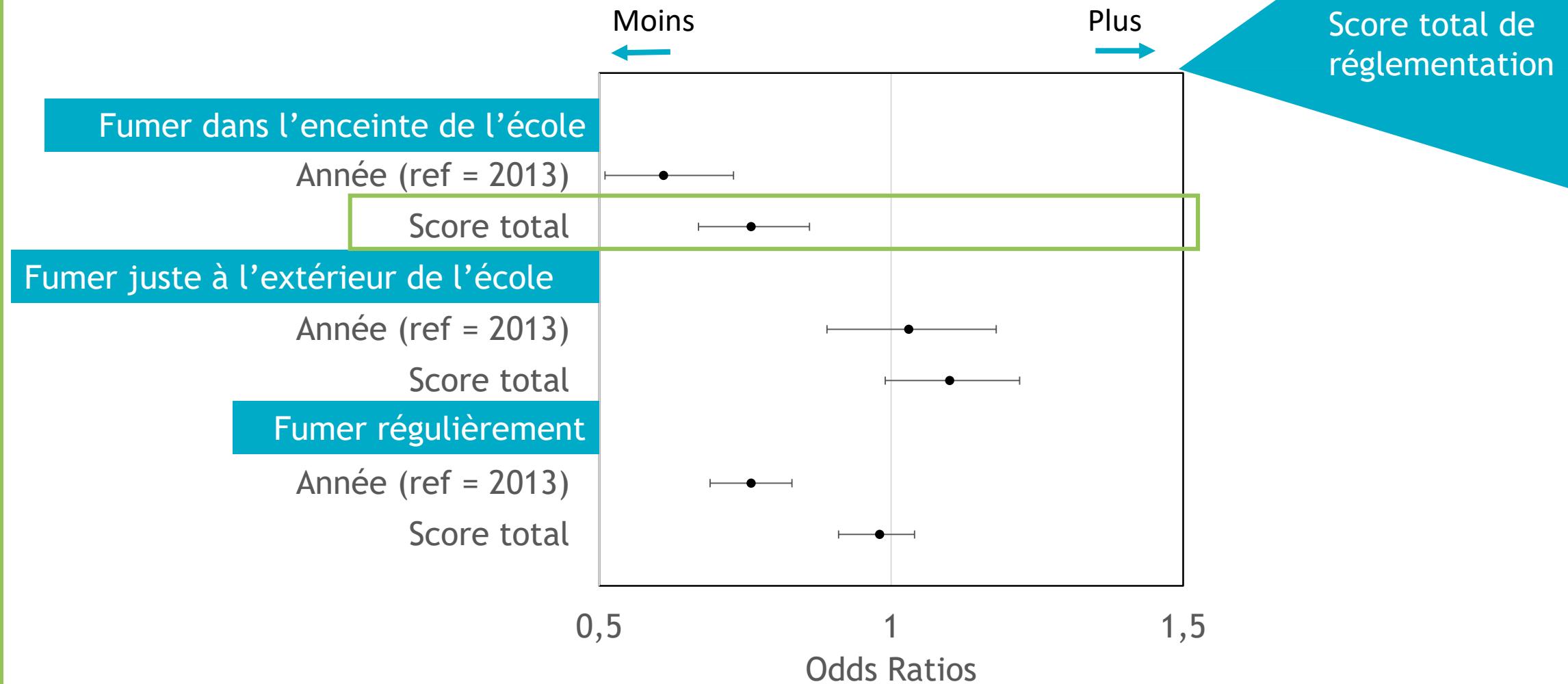


Année et dimensions inclus simultanément, école en effet random, contrôlé pour les variables confondantes (âge, sexe, statut socio-économique, habitudes tabagiques de la famille, habitudes tabagiques à la maison)

## Fumer régulièrement



Année et dimensions incluses simultanément, école en effet random, contrôlé pour les variables confondantes  
Institute of Health and Society (âge, sexe, statut socio-économique, habitudes tabagiques de la famille, habitudes tabagiques à la maison)



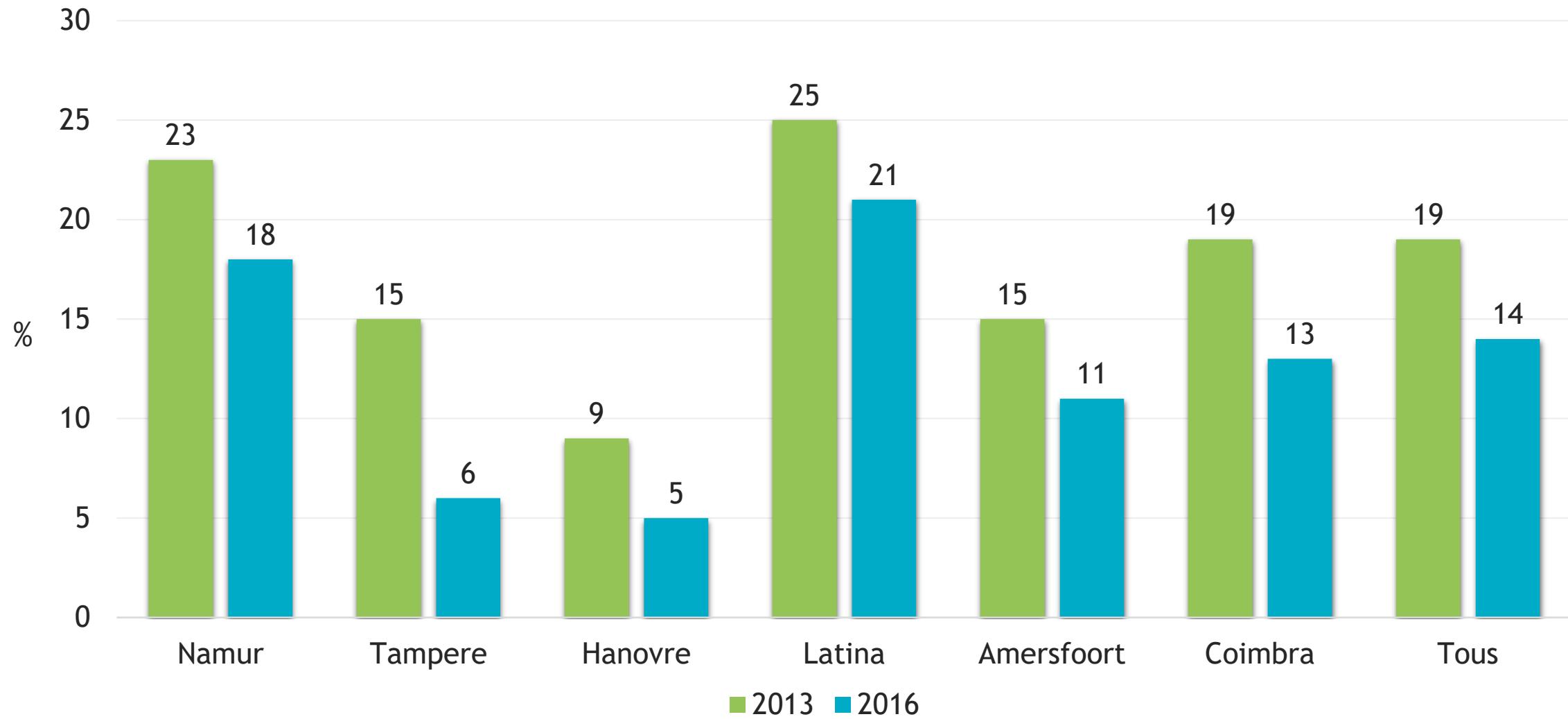
Institute of Health and Society (IRSS)  
 Effet de l'année et du score total de réglementation du tabac à l'école, école en effet random, contrôlé pour les variables confondantes (âge, sexe, statut socio-économique, habitudes tabagiques de la famille, habitudes tabagiques à la maison)

	Smoking on school premises (%) *		Smoking just outside school premises (%) *		Weekly smoking (%)	
	2013	2016	2013	2016	2013	2016
<b>Namur</b>	22.48	18.00	62.05	60.89	23.47	18.21
<b>Tampere</b>	17.74	15.97	55.48	50.00	14.68	6.43
<b>Hanover</b>	23.53	17.95	35.29	46.15	9.03	4.97
<b>Latina</b>	67.08	46.55	38.2	36.72	25.31	21.04
<b>Amersfoort</b>	41.59	23.29	34.96	32.88	14.70	10.91
<b>Coimbra</b>	/	/	32.11	40.58	19.16	13.16
<b>All</b>	<b>39.72</b>	<b>30.17</b>	<b>44.61</b>	<b>44.48</b>	<b>19.24</b>	<b>14</b>

\* Among current smokers

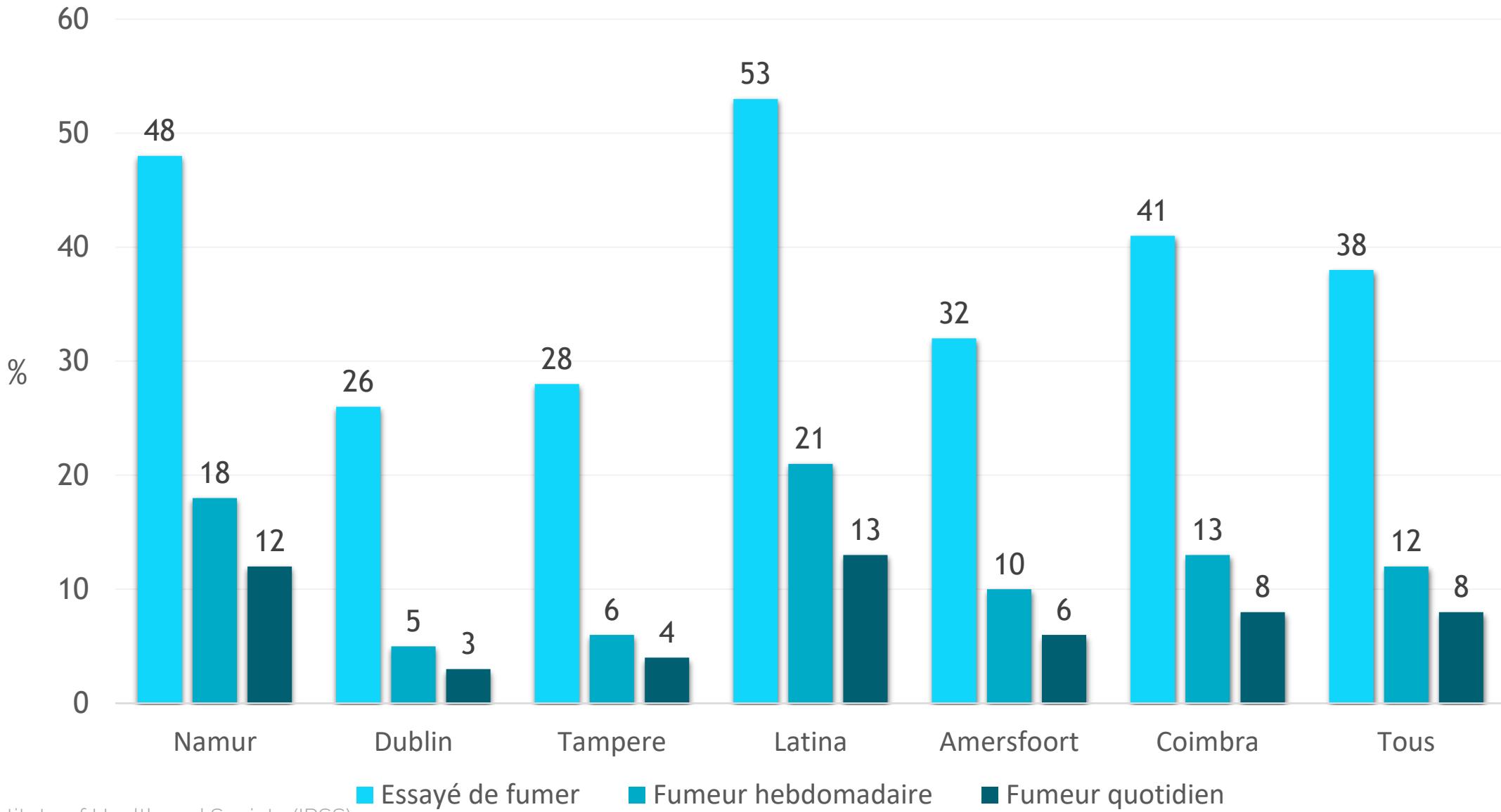
## ÉVOLUTION

### Fumeurs hebdomadaires (%)



# TABAGISME À L'ADOLESCENCE

Tabagisme des adolescents européens, 2016 (%)



# Items – 1. Comprehensiveness

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## ➤ STAFF

1) Does that policy specifically prohibit smoking cigarettes at each of the following locations for each of the following groups?

	Students	Staff	Visitors
<ul style="list-style-type: none"><li>• School buildings</li><li>• On school grounds, including car parks and playing fields.</li><li>• In school buses or other vehicles used to transport students</li><li>• At off-campus, school -sponsored events</li></ul>			

2) Does that policy specifically prohibit smoking cigarettes at each of the following times for each of the following groups?

	Students	Staff	Visitors
<ul style="list-style-type: none"><li>• During school hours</li><li>• During non-school hours</li></ul>			

# Items – 1. Comprehensiveness

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## ➤ STAFF

3) Does that policy specifically prohibit smoking cigarettes at each of the following locations for each of the following groups?

	Students	Staff	Visitors
• Does your school have a smoking area/zone (e.g. a room or location ) for :			

**Comprehensiveness – Staff = Average of these three items**

# Items – 1. Comprehensiveness

---

## ➤ STUDENTS

2013: Is there a rule against tobacco in your school?

Comp = 0	Comp = 1
1 = There is no rule 5 = Don't know	2 = There is a rule but it isn't enforced 3 = There is a rule and it is sometimes enforced 4 = There is a rule and it is strictly enforced

2016: Are students allowed to smoke on the school premises?

Comp = 0	Comp = 1
3 = Yes, students are allowed to smoke in certain areas 4 = Yes, students are allowed to smoke anywhere on the school premises 5 = Don't know	1 = No, students are not allowed to smoke. This rule is strictly enforced 2 = No, students are not allowed to smoke. But this rule is not strictly enforced

# Items – 2. Enforcement

## ➤ STUDENTS

1) 2013: Is there a rule against tobacco in your school?

Strictly	Not strictly
4 = There is a rule and it is strictly enforced  1 = There is no rule 2 = There is a rule but it isn't enforced 3 = There is a rule and it is sometimes enforced 4 = There is a rule and it is strictly enforced 5 = Don't know	1 = There is no rule 2 = There is a rule but it isn't enforced 3 = There is a rule and it is sometimes enforced 4 = There is a rule and it is strictly enforced 5 = Don't know

2016: Are students allowed to smoke on the school premises?

Strictly	Not strictly
1 = No, students are not allowed to smoke. This rule is strictly enforced  2 = No, students are not allowed to smoke. But this rule is not strictly enforced 3 = Yes, students are allowed to smoke in certain areas 4 = Yes, students are allowed to smoke anywhere on the school premises 5 = Don't know	2 = No, students are not allowed to smoke. But this rule is not strictly enforced 3 = Yes, students are allowed to smoke in certain areas 4 = Yes, students are allowed to smoke anywhere on the school premises 5 = Don't know

# Items – 2. Enforcement

---

- **STAFF** What were the consequences for students who were caught violating your school's smoking rules since September?

(TREATING POLICY INFRINGEMENTS AS A HEALTH ISSUE )

- Encouraged, but not required, to participate in an assistance, education, or quit-smoking programme
- Required to participated in an assistance, education, or quit-smoking programme

(TREATING POLICY INFRINGEMENTS AS A DISCIPLINARY ISSUE )

- Warning issued (written or verbal)
- Referred to a school administrator
- Referred to a school counsellor
- Parents informed
- Tobacco confiscated
- Assigned additional classwork
- Assigned to help around the school
- Fine
- Detention
- Suspension
- Expulsion

2 points: at least one of the health-related consequences  
1 point: at least one of the disciplinary-related consequences.

## Items – 2. Enforcement

---

### ➤ STAFF

What were the consequences for students who were caught violating your school's smoking rules since September?

Maximum of consequences score if:

In the last six months, how many students have broken the school's smoking rules?

1 = None

2 = A few

3 = Some

4/5 = Most/All

# Items – 3. Communication

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## ➤ STAFF

1) Which of the following methods does your school use to communicate its rules on cigarette smoking to students?

- In writing in a student diary
- In writing in a school handbook
- In writing in a school newsletter
- Verbally, in discussions with students (e.g. assemblies, school council)
- Posted on school website(s)
- On display at school
- Email

Written => Formal

## ➤ STAFF

2) Does your school have procedures for informing all students...

- About rules related to cigarette smoking by students?
- About what happens if they break the rules?
  - + Information to students' families, to staff and to visitors

# Smoking outcomes

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## ➤ Smoking on school premises

Where do you usually smoke cigarette ? - On the school premises

## ➤ Smoking just outside school premises

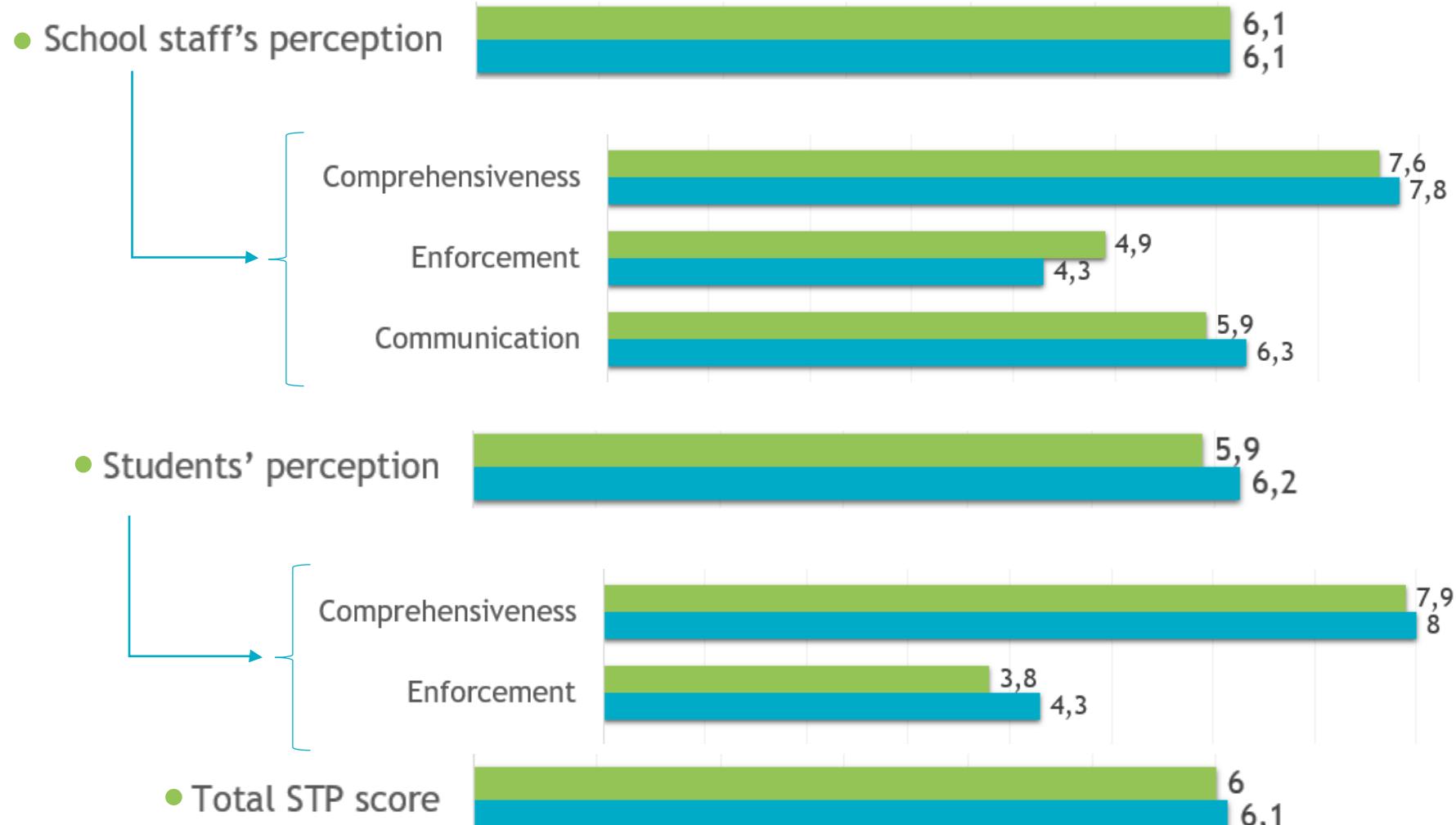
Where do you usually smoke cigarette ? - Just outside the school

## ➤ Smoking status

How many cigarettes have you smoked during the last 30 days ?

Weekly smoker	Non weekly smoker
3 = 1 to 2 cigarettes per week	0 = I have never smoked
4 = 3-7 cigarettes per week	1 = None
5 = 1 to 5 cigarettes per day	2 = 1 to 2 cigarettes during the last 30 days
6 = 6 to 10 cigarettes per day	
7 = 11 to 20 cigarettes per day	
8 = 21 to 30 cigarettes per day	
9 = More than 30 cigarettes per day	

Perceived school tobacco policies (/10) by students (n=18,502) and school staff members in 2013 and 2016, SILNE and SILNE-R projects



# Description of STP dimensions (scale 0–10), according to students' and school staff members' perceptions, by city and year (mean (std)), SILNE-R study in six EU cities, 2013–2016

Dimensions /10	Cities and year												Total	
	Namur (N <sub>schools</sub> = 7)		Tampere (N <sub>schools</sub> = 8)		Hanover (N <sub>schools</sub> = 5)		Latina (N <sub>schools</sub> = 7)		Amersfoort (N <sub>schools</sub> = 5)		Coimbra (N <sub>schools</sub> = 6)			
	2013	2016	2013	2016	2013	2016	2013	2016	2013	2016	2013	2016	2013	2016
School staff's perceptions	5.6 (0.7)	5.6 (0.6)	6.5 (0.9)	6.1 (0.6)	5.9 (1.1)	6.1 (1.2)	5.4 (0.6)	6.2 (1.0)	6.0 (1.2)	5.1 (0.9)	7.5 (1.0)	7.6 (0.7)	6.1 (1.1)	6.1 (1.1)
Comprehensiveness	7.4 (1.1)	7.7 (1.2)	8.3 (1.2)	8.3 (0.9)	7.4 (1.1)	8.1 (1.1)	<b>6.1 (0.9)</b>	<b>8.2 (1.2)</b>	7.5 (2.1)	5.4 (1.2)	9.1 (0.7)	8.6 (1.1)	7.6 (1.5)	7.8 (1.4)
Enforcement	4.0 (1.0)	3.5 (0.7)	4.8 (2.3)	4.0 (1.1)	5.6 (2.7)	4.6 (3.1)	4.3 (1.5)	3.4 (1.7)	4.7 (3.0)	3.7 (0.9)	6.2 (2.0)	6.7 (1.2)	4.9 (2.1)	4.3 (1.8)
Communication	5.5 (0.6)	5.6 (1.1)	6.3 (1.2)	5.9 (0.7)	4.8 (1.5)	5.6 (1.2)	5.7 (1.6)	7.0 (0.9)	5.8 (1.8)	6.2 (1.2)	7.4 (1.2)	7.5 (0.9)	5.9 (1.5)	6.3 (1.2)
Students' perceptions	5.3 (0.8)	6.4 (1.2)	6.9 (0.7)	7.6 (1.3)	7.4 (0.8)	7.1 (1.3)	2.9 (1.0)	3.9 (1.2)	5.5 (1.8)	3.3 (3.5)	7.6 (1.5)	8.1 (1.1)	5.9 (2.0)	6.2 (2.4)
Comprehensiveness*	<b>7.5 (0.6)</b>	<b>9.5 (0.4)</b>	9.4 (0.4)	9.3 (0.5)	<b>8.1 (0.4)</b>	<b>9.0 (0.4)</b>	5.5 (2)	6.6 (1.6)	7.7 (1.8)	3.7 (3.8)	9.5 (0.3)	9.2 (0.5)	7.9 (1.8)	8.0 (2.5)
Enforcement*	3.2 (1.6)	3.3 (2.3)	4.3 (1.2)	6.0 (2.2)	6.8 (1.3)	5.2 (2.2)	0.3 (0.2)	1.3 (1.2)	3.3 (2.0)	2.8 (3.3)	5.7 (2.8)	7.1 (1.7)	3.8 (2.6)	4.3 (2.9)
Total STP score	5.5 (0.7)	6.0 (0.7)	6.7 (0.4)	6.9 (0.8)	6.7 (0.8)	6.6 (1)	4.1 (0.7)	5.1 (1.0)	5.7 (0.8)	4.2 (2.0)	7.6 (1.1)	7.9 (0.7)	6.0 (1.3)	6.1 (1.5)

Scores are aggregated at the school level (N = 38). Significant changes between 2013 and 2016 (p < .05) are in bold.

\* The wording changed between 2013 and 2016.

Associations between outcomes measured in 2016 and the change in STP over time, multilevel logistic regression: odds ratio (confidence interval), SILNE-R study in six EU cities, 2013–2016

	<b>Model 1</b>	<b>Model 2</b>	<b>Model 3</b>
<b>Smoking on school premises <sup>a</sup></b>			
<b>Change in STP</b>	0.76 ( 0.52 - 1.10)	0.64 ( 0.47 - 0.87) **	0.65 ( 0.47 - 0.89) **
<b>Smoking just outside school premises</b>			
<b>Change in STP</b>	1.06 ( 0.83 - 1.36)	1.05 ( 0.82 - 1.35)	1.09 ( 0.86 - 1.38)
<b>Weekly smoker</b>			
<b>Change in STP</b>	1.04 ( 0.82 - 1.31)	0.97 ( 0.84 - 1.11)	0.97 ( 0.86 - 1.10)

Model 1: Effect of STP change (STP2016 – STP2013), school as random effect; Model 2: Model 1 including the STP score in 2013 and smoking prevalence in 2013. Model 3: Model 2 including confounding variables (age, gender, socio-economic status, family smoking, and smoking environment at home)

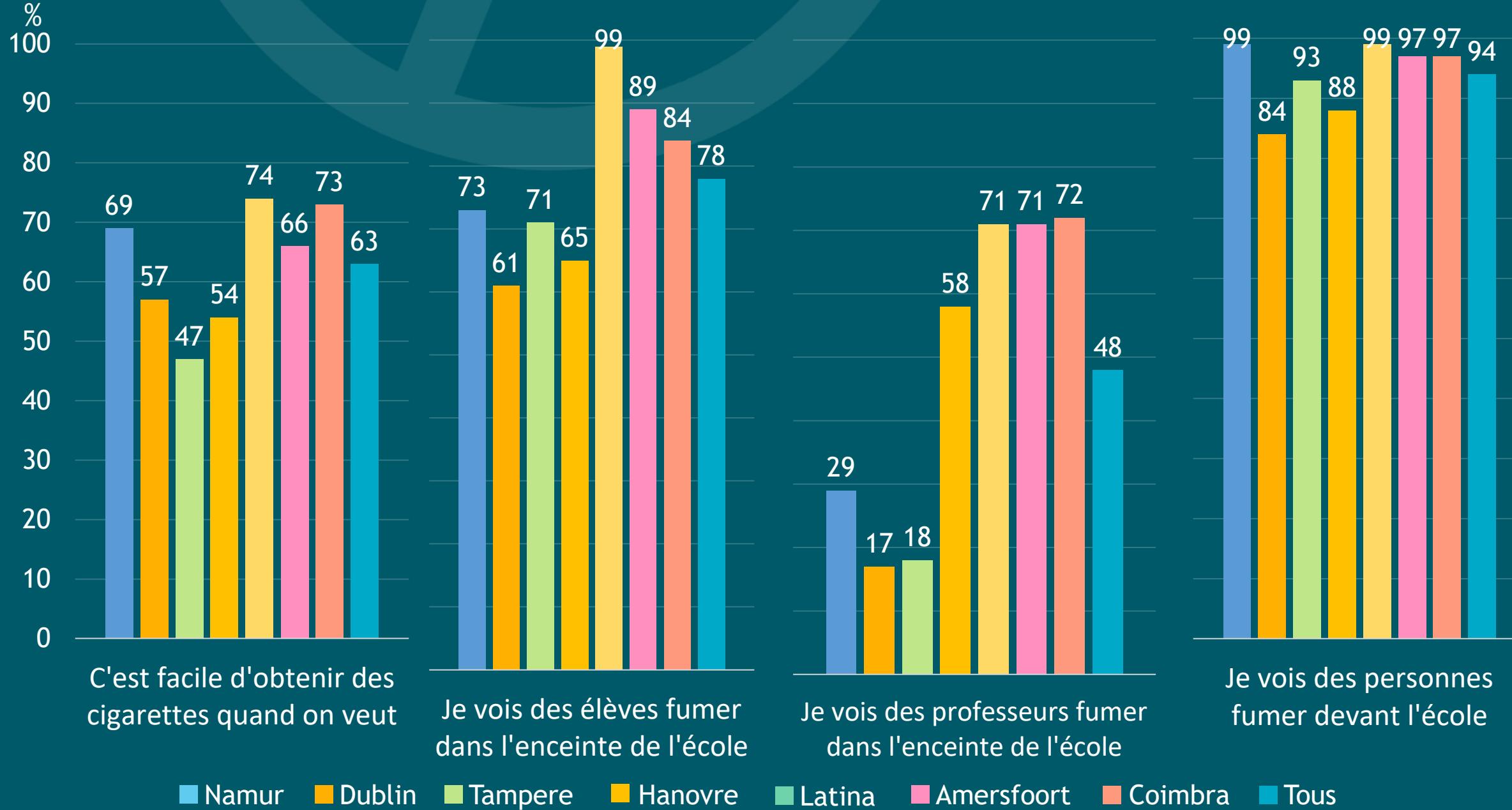
\* p < .05, \*\* p < .01, \*\*\* p < .001

<sup>a</sup>Analyses of smoking on school premises do not include Coimbra.

# Rules perception and compliance

## Differences in Europe in 2016

## RULES PERCEPTION AND COMPLIANCE



## RULES PERCEPTION AND COMPLIANCE

