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Title: Teenagers' perceptions of risk from cigarettes and e-cigarettes

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Background

Perception of risk deters teenage smoking but less is known about e-cigarettes and risk perception.

Objectives

To examine the degree of risk teenagers perceive from cigarette and e-cigarette use.
To describe gender differences in perceived risk.

Methods

The European School Survey Project on Alcohol and other Drugs (ESPAD) surveyed 1,967 students, born in 2003, in a nationally stratified random sample of 50 schools in Ireland. Variables included perceived risk of harm from occasional smoking, smoking a pack of cigarettes or more per day, using e-cigarettes once or twice. Descriptive and bivariate analyses were performed using Stata version 16.

Results

Asked about risk from smoking cigarettes occasionally (Table 1), 12.7% (n=245) reported 'no risks', 34% (n=658) 'moderate risk', 27.4% (n=531) 'slight risk', and 22.7% (n=440) 'great risk'. Males perceived 'no risk' (15.2%, n=142) more than females (10.3%, n=103) ($p < .01$), while more females perceived 'slight/moderate' risks.

Regarding risk from smoking a pack or more of cigarettes a day (Table 2), a majority (69%, n=1359) perceived 'great risk', 15.8% (n=306) 'moderate risk', and 6% (n=116) 'no risk'. Statistically significant gender differences ($p < .01$) were observed with more male (8.6%, n=81) than female students (3.5%, n=35) perceiving 'no risk'. More females (73.7%, n=734) than males (65.7%, n=616) perceived 'great risk' in smoking a pack or more a day ($p < .001$).

Regarding risk from trying e-cigarettes once or twice (Table 3), almost half (46.3%, n=893) perceived 'no risk', 37.2% (n=718) 'slight risk', and 4.2% (n=81) 'great risk'. More males (51.1%, n=477) than females (41.8%, n=416) perceived 'no risk', more females (4.5%, n=45) than males (3.9%, n=36) perceived 'great risk' ($p < .001$).

Conclusions

Teenagers perceive cigarettes to have much greater risk than e-cigarettes. Teenage girls perceive significantly greater risk than boys in both cigarette and e-cigarette use. More clarity is required about e-cigarette risk in health education programmes.

TABLES

Risk of occasional smoking	Male		Female		All	
	N	%	N	%	N	%
No risk	142	15.2	103	10.3	245	12.7
Slight risk	239	25.5	292	29.2	531	27.4
Moderate risk	309	33.0	349	34.9	658	34.0
Great risk	208	22.2	232	23.2	440	22.7
Don't know	38	4.1	23	2.3	61	3.2
Total	936	100.0	999	100.0	1935	100.0

Table 4.6: Perceived risk of occasional cigarette smoking by gender

Table 1: Perceived risk of occasional cigarette smoking, by gender

Perceived risk of occasional smoking by gender; [$\chi^2(4) = 16.894, p=.002, \text{Cramer's } V=.093$]

Risk of smoking a pack or more a day	Male		Female		All	
	N	%	N	%	N	%
No risk	81	8.6	35	3.5	116	6.0
Slight risk	52	5.5	54	5.4	106	5.5
Moderate risk	152	16.2	154	15.5	306	15.8
Great risk	616	65.7	734	73.7	1359	69.8
Don't know	37	3.9	19	1.9	56	2.9
Total	938	100.0	996	100.0	1934	100.0

Table 4.7: Perceived risk of smoking a pack or more a day by gender

Table 2: Perceived risk of smoking a pack or more a day, by gender

Perceived risk of smoking a pack a day by gender: [$\chi^2(4)=32.682, p=.000, \text{Cramer's } V=.130$]

Perceived risk of trying e-cigarettes once or twice	Male		Female		All	
	N	%	N	%	N	%
No risk	477	51.1	416	41.8	893	46.3
Slight risk	312	33.4	406	40.8	718	37.2
Moderate risk	60	6.4	90	9.5	150	7.8
Great risk	36	3.9	45	4.5	81	4.2
Don't know	49	5.3	38	3.8	87	4.5
Total	934	100.0	995	100.0	1929	100.0

Table 4.43: Perceived risk of trying e-cigarettes once or twice

Table 3: Perceived risk of trying e-cigarettes once or twice, by gender

Trying e-cigarettes once or twice: [$\chi^2(4)=22.958, p<.001, \text{Cramer's } V=.109$]