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

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Teenagers' perceptions of risk from cigarettes and e-cigarettes

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: [$\chi^2(4)=22.958, p<.001, \text{Cramer's } V=.109$]