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HEALTH BEHAVIOUR IN  
SCHOOL-AGED CHILDREN  
LËTZEBUERG / LUXEMBOURG

# Risk behaviours of school-aged children in Luxembourg

Report on the Luxembourg HBSC Survey 2022

**HEALTH BEHAVIOUR IN SCHOOL-AGED CHILDREN:**  
WORLD HEALTH ORGANIZATION COLLABORATIVE  
CROSS-NATIONAL STUDY (HBSC)



LE GOUVERNEMENT  
DU GRAND-DUCHÉ DE LUXEMBOURG  
Ministère de l'Éducation nationale,  
de l'Enfance et de la Jeunesse



LE GOUVERNEMENT  
DU GRAND-DUCHÉ DE LUXEMBOURG  
Ministère de la Santé  
et de la Sécurité sociale

Direction de la santé



FACULTY OF HUMANITIES,  
EDUCATION AND  
SOCIAL SCIENCES



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# Acknowledgement

The Health Behaviour in School-aged Children (HBSC) study was initiated in 1982 and has been conducted every four years to understand and promote the health and well-being of children and adolescents. Currently, more than 50 countries participate in the international study, Luxembourg being one of them since 2006. By comparing data over many years and across countries, policy makers, teachers, students, parents, as well as anyone interested in the health of the growing generation can make informed decisions.

This report on the HBSC 2022 survey was only possible because many people contributed to data collection and processing. We would like to take this opportunity to thank them.

HBSC is an international survey conducted in collaboration with the World Health Organization-Regional Office for Europe. We would like to thank the international coordinator of the 2021/22 survey, Dr Joanna Inchley from the University of Glasgow. Our thanks also go to the database manager, Professor Oddrun Samdal from the University of Bergen, and to Joe Hancock from the International Coordinating Centre in Glasgow, who developed the artwork for this report.

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**For the HBSC Luxembourg team:**

Dr Carolina Catunda and Dr Maud Moinard (Co-Principal Investigators)



# Summary

## About this report

The present report publishes the results dedicated to risk behaviours pertaining to the Health Behaviour in School-aged Children survey conducted in Luxembourg in 2022. It involves 7 893 adolescents aged 11-18 and provides comprehensive information on the following areas: alcohol use and drunkenness experience, cigarette and e-cigarette use, cannabis use and acceptability, sexual intercourse and contraception, bullying, physical fighting, and problematic use of social media.

## Alcohol use and drunkenness experience

About 60% of the surveyed adolescents reported to have never drunk alcohol in their life. Alcohol use was positively associated with age and family affluence. The older an adolescent and the higher the family affluence, the higher the chance of having already drunk alcohol in their lifetime and over the past month. The prevalence of alcohol use prevailed in adolescents living with a unique parent or within a stepfamily, as well as in adolescents with no migration background. Gender was unrelated to alcohol use. The social distribution of drunkenness experience followed similar patterns, with about 79% of the respondents reporting having never been drunk in their life. The prevalence of both alcohol use and drunkenness experience have slightly decreased since 2018.

## Cigarette and e-cigarette use

About 80% of the participants reported having never smoked in their life. Overall, cigarette smoking was associated with age, family structure, and type of school. Prevalence of smokers was higher in older adolescents and in *formation professionnelle* attendees and lower in respondents living with both parents. Gender involved small differences as well: while lifetime prevalence was higher in girls, prevalence of smoking over the past month was higher in boys. The differences in question are relatively small, however. Family affluence and migration background were uninfluential here. In addition, about 75% of the respondents indicated that they had never vaped. Lifetime prevalence was positively linked to age. This association was reflected in the link between vaping and type of school. Lifetime prevalence was higher in adolescents of high family affluence than in their counterparts. Exhibiting no migration background and living with both parents was associated with a relatively low lifetime prevalence. Prevalence over the past month followed a similar trend, although it was slightly higher in girls than in boys. The prevalence of cigarette use has slightly decreased since 2018.

## Cannabis use and acceptability

About 21% of the respondents indicated that they had already used cannabis. Lifetime prevalence was positively associated with age. The relation between type of school and cannabis partly reflected this age effect. Living with both parents was linked to lower chances of having already used cannabis. Gender, family affluence, and migration background were unrelated to cannabis use. Data pertaining to cannabis use over the past month follow a similar distribution. The prevalence of cannabis use has slightly increased since 2018. In addition, about 63% of the respondents reported a poor acceptability of cannabis use. About 54% of the respondents indicated that their friends reject cannabis use; about 88%, that their parents reject it.

### **Sexual intercourse and contraception**

About 29% of the respondents indicated having already had sexual intercourse. This prevalence was higher in older adolescents, boys, first-generation migrants, participants living with a unique parent or within a stepfamily, and *formation professionnelle* pupils than in their counterparts. Compared to 2018, it is of note that family affluence was no longer associated with sexual intercourse in 2022. In addition, about 41% of the respondents reported that their partner or themselves used regular contraceptive pill the last time they had sexual intercourse. About 59% reported the use of a condom on the same context. The social distribution of the prevalence of contraception use was similar in 2018 and 2022.

### **Problematic use of social media**

About 9% of the participants appeared as problematic social media users. 13-14-year-old adolescents, girls, respondents of low family affluence, and ESG pupils were more likely to be such users than their counterparts. Moreover, living with both parents and presenting no migration background turned out to play a protective role against social media disorders. The prevalence of problematic social media users has almost doubled since 2018.

### **Bullying, cyberbullying, and physical fighting**

Bullying victimisation was lower at school than online. About 7% of the adolescents declared having been bullied at school over the past couple of months. Younger adolescents, ESG attendees, and girls were more likely to have been bullied than their counterparts. Living with both parents played a protective role. Cyberbullying victimisation concerned about 13% of the adolescents. This rate was higher in 11-14-year-old participants and in ESG pupils than in their counterparts. Bullying perpetration was lower at school than online. In both cases, perpetrators were more likely to be boys, aged 13-14, attendees of the *voie de préparation*, to live with a unique parent or within a stepfamily, and to present a migration background. Overall, the prevalence of online and offline victims and perpetrators has been stable since 2018. The prevalence of online victims increased over the past four years, however. In addition, about 30% of the surveyed adolescents reported to have been involved in at least one physical fight over the past year. The corresponding prevalence was higher in younger adolescents, boys, adolescents of low family affluence, first- and second-generation migrants, participants living within a stepfamily or with a unique parent, and in attendees of the *classes inf.* (lower classes) and ESGs. Since 2018, the rate of participants reporting having been involved in a physical fight has increased in boys and has been stable in girls.

### **Bullying in school: a closer look**

A pupil is considered to be bullied in school when repeatedly exposed to negative actions of others over time. In Luxembourg, although the prevalence of bullying victimisation decreased significantly since 2006, between 2018 and 2022 it remained stable. As bullying is associated with negative mental health consequences and, in Luxembourg, to the type of school, the present section aims to better understand the above-mentioned differences and its relation to pupils' mental health. Adolescents in Luxembourg who had not been bullied exhibited higher levels of well-being compared to those who had experienced bullying in past couple of months. Further analysing the results by type of school, however, no significant differences in the well-being levels were found between victims and non-victims of bullying in the ESG - *classes inférieures (voie de préparation)*. In all other types of school, this difference remained significant. It is worth noting that ESG - *classes inférieures (voie de préparation)* presented the highest prevalence of bullying victims. As individuals tend to evaluate their experiences in comparison to others, these results suggest that this problem might be relativised in a context where the prevalence of bullying is high. In other words, that a high prevalence of bullying in pupils' environment might have mitigated the relationship between bullying and well-being.

**Conclusions and perspectives**

The prevalence of most of the examined risk behaviours has slightly decreased or has remained stable since 2018. Two exceptions are noticeable. Cannabis use, whose prevalence has slightly increased, and problematic use of social media, whose prevalence has almost doubled since 2018. In addition, the conducted analyses have in most cases identified an association between risk behaviours and age, family structure, and type of school. Gender, family affluence, and migration background involved less systematic and weaker links to the examined risk behaviours. The social distribution of risk behaviours has not substantially changed since 2018.



Risk behaviours





## Risk behaviours

Adolescence has long been considered a transitional period involving a search for more autonomy vis-à-vis family and an increase of the importance attributed to peer connectedness (Giordano, 2003). This pivotal period in the development of one's self concept is commonly associated with the onset of internalising behaviours (Pfeifer & Allen, 2021), potential generational confrontation (Warren-Adamson & Coleman, 1992), as well as with an inclination to make new experiences, question or violate norms, and to engage in risk behaviours (Jackson et al., 2012; Kelley et al., 2004; Leather, 2009).

Generally defined as "any consciously, or non-consciously controlled behaviour with a perceived uncertainty about its outcome, and/or about its possible benefits or costs for the physical, economic or psycho-social well-being of oneself or others" (Trimpop, 1994), risk behaviours have received specific characterisations in different research fields (e.g., economics, public health). Within the HBSC framework, risk behaviours are identified based on their associated potential negative and/or undesired health outcomes. More specifically, they refer to substance use (alcohol, cannabis, cigarette, e-cigarette), non-contraception, bullying victimisation and perpetration, physical fighting, and problematic social media use.

The present report updates and accounts for the prevalence of risk behaviours in adolescents in Luxembourg. This is part of a series of reports, that considered altogether provide the community with a comprehensive picture of adolescents' health and health behaviours in 2022 in Luxembourg. It relies on data collected in the first semester of 2022, in which 9 432 pupils from 688 classes and 152 schools attending Luxembourg schools responded to an anonymised paper-pencil questionnaire in class, during school hours. The study sample of this report involves 7 893 adolescents aged 11-18 and attending schools that follow the national curriculum<sup>1</sup>.

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<sup>1</sup> For more information on the population, please refer to Catunda et al. (2023).

## Alcohol use and drunkenness experience

Despite legal measures restricting the purchase of alcoholic beverages by adolescents in most countries, alcohol has remained the most commonly used substance in this population segment for decades (Leung et al., 2014; Wu & Ringwalt, 2006). In 2016, the prevalence of current drinkers aged 15-19 was the highest in Europe (43.2%) and in the Americas (38.2%); the corresponding rate was 26.5% worldwide (World Health Organization, 2018). Alcohol use during adolescence remains a matter of concern for at least two reasons. First, it affects alcohol use in adulthood: the sooner the commencement of alcohol intake, the higher the probability of alcohol use and disorders in adulthood (Grant et al., 2001; Leung et al., 2014). Second, alcohol use is associated with both structural (e.g., accelerated decrease in the volume of grey matter) and functional (e.g., in terms of learning skills) impairments (Lees et al., 2020; Spear, 2018).

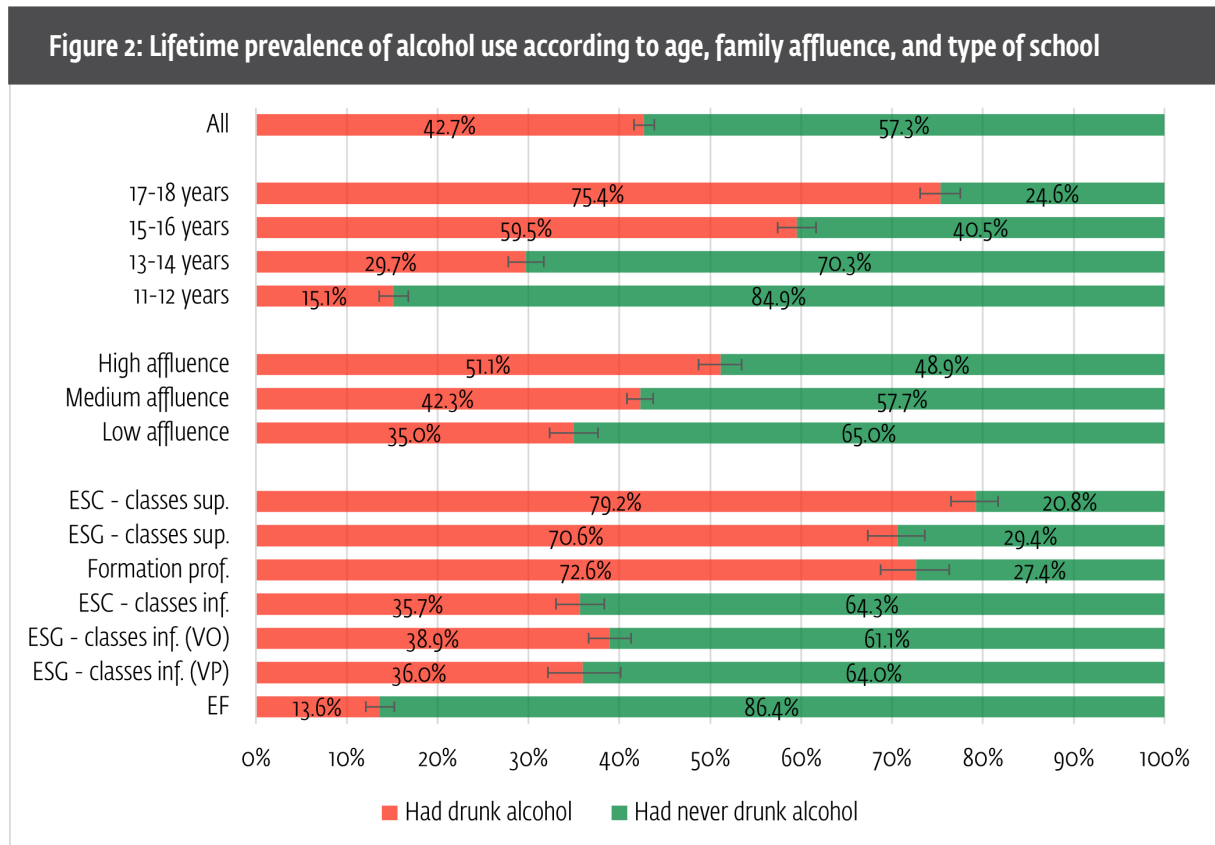
### Alcohol use

The HBSC survey comprises items assessing alcohol use and drunkenness. More specifically, adolescents were asked to report “on how many days [they] ha[d] drunk alcohol” in their life and over the elapsed month. In both cases, response options ranged from 1 (“never”) to 7 (“30 days or more”). Answers were recoded to distinguish (1) between the adolescents who reported having never drunk alcohol in their life and those who reported having already drunk alcohol, and (2) between the adolescents who reported not having drunk alcohol over the past month, those who reported having drunk alcohol one to nine days (occasional drinkers), and those who reported having drunk alcohol at least ten days (regular drinkers). Figure 1 presents a flowchart with the distribution of each question.



As shown in Figure 2, 57.3% of the surveyed adolescents reported to have never drunk alcohol in their life. This prevalence was 55.9% in 2018. Age, family affluence, and type of school involved the largest differences in that respect. Thus, the older an adolescent and the higher an adolescent’s family affluence, the higher the probability of having already drunk alcohol. While differences pertaining to the type of school partly reflect these age-related dynamics, the prevalence of pupils reporting no alcohol use in their life was higher in the pupils attending the *classes supérieures*

of ESGs (29.4%) and *formation professionnelle* (27.4%) than in those attending the *classes supérieures* of the ESCs (20.8%). It should also be noted that lifetime prevalence of alcohol use was lower in adolescents living with both parents and in first- and second-generation migrants than in their respective counterparts. Gender was uninfluential here (see the appendix, Figure 27 and Table 3).



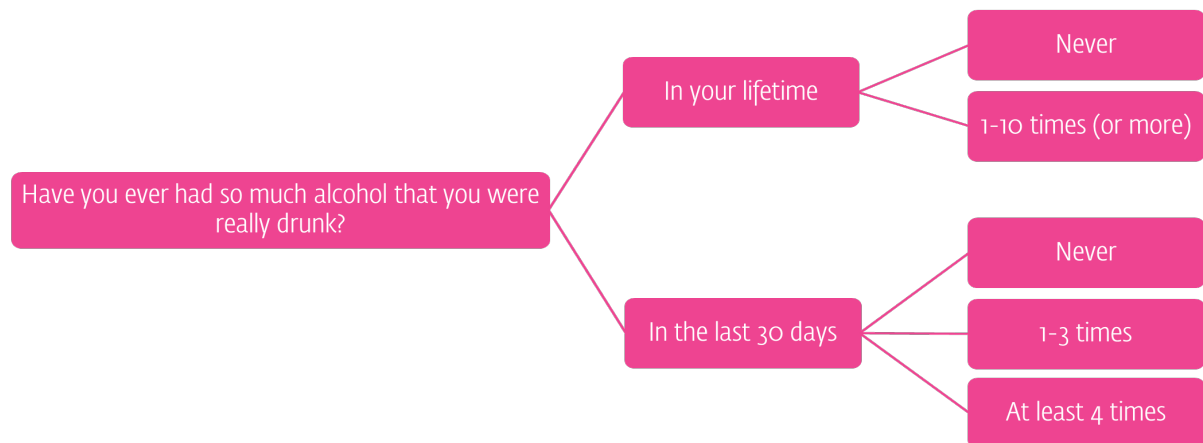
In 2022, 72.5% of the participants indicated that they had not used alcohol over the past month, against 71.1% in 2018. The prevalence of alcohol use over the past month followed distribution patterns rather similar to those described above. It should be noted, however, that the prevalence of regular drinkers was higher in *formation professionnelle* than in other types of school (for comprehensive details, see the appendix, Figure 28 and Table 4).

In Luxembourg, results from the previous HBSC waves pinpointed a considerable decrease in youth's alcohol use and drunkenness experience since 2010 (Heinz et al., 2020). This is not however, a Luxembourg specific phenomenon. Over the past few decades, research has highlighted a general decrease in adolescents' alcohol use in most European countries (Kraus et al., 2020). Several factors have been found to partly explain such dynamics, including policy measures (Lintonen et al., 2013), economic contraction or crisis (Pablonia, 2017), migration and religious proscriptions (Monshouwer et al., 2007), or the use of another psychoactive substance such as cannabis (Gripe et al., 2018). However, the extent to which such trends apply to each subtype of users (e.g., heavy drinkers) remains understudied (Loy et al., 2021).

## Drunkenness

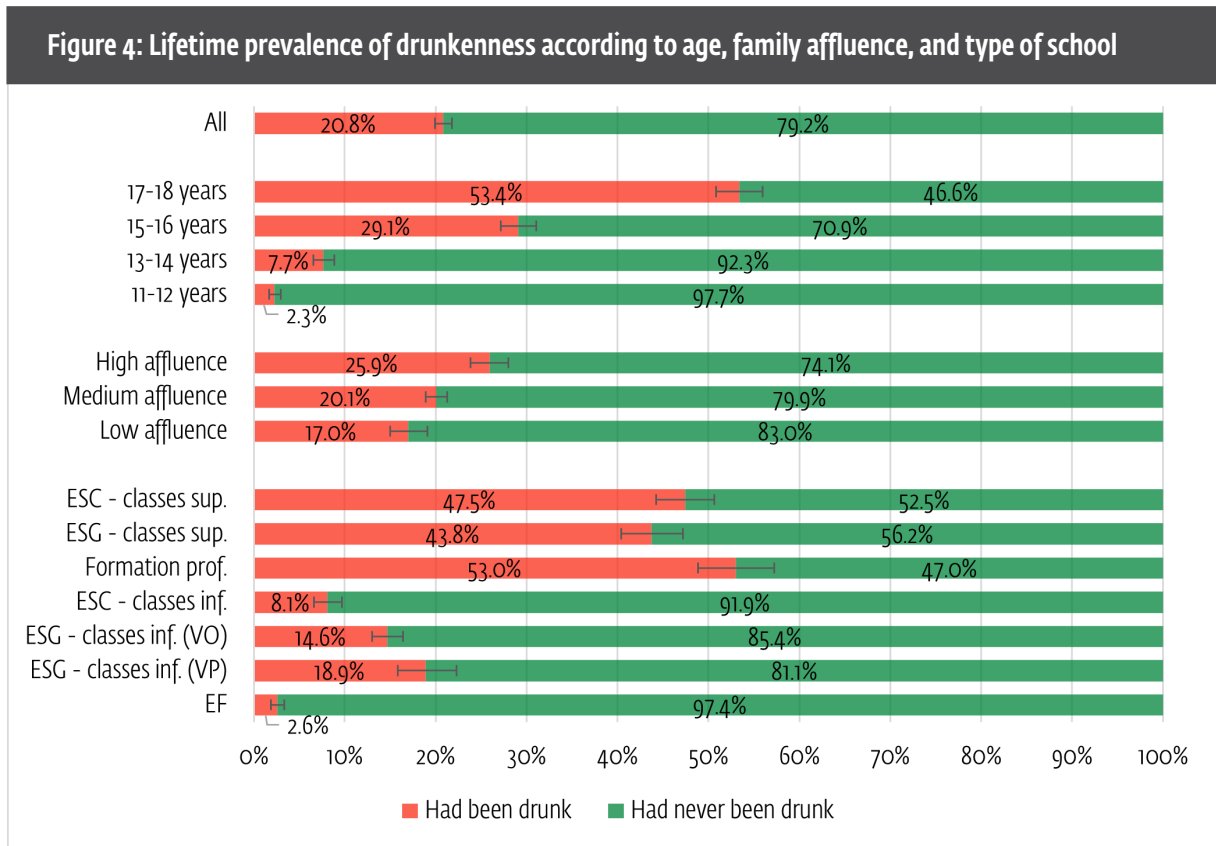
Similarly to alcohol use, adolescents were also asked to indicate the extent to which they had “had so much alcohol that [they] were really drunk” in their life and over the last month. Here, response options ranged from 1 (“No, never”) to 5 (“Yes, more than 10 times”). Answers were recoded to discriminate (1) between the adolescents who reported having never been drunk in their life and those who reported having already been drunk, and (2) between the adolescents who reported not having been drunk over the past month, those who reported having been drunk once to three times, and those who reported having been drunk at least four times. Figure 3 presents a flowchart with the distribution of each question.

**Figure 3: Categorisation of drunkenness according to lifetime and last month**



In 2022, 20.8% of the participants reported having already been drunk at least once in their life (see Figure 4), against 22.1% in 2018. Between 2006 and 2018 a marked decrease can be observed, however, between 2018 and 2022 this decrease persists for boys (Health Behaviour in School-aged Children Luxembourg Study, 2023), while the prevalence of girls who have been drunk in the last month is stable. In 2022 no significant gender differences were found.

Experience of drunkenness was positively associated with age and family affluence (in other words, older adolescents and those from higher affluence reported it more frequently; see Figure 4). In older adolescents, the prevalence of drunkenness experience was higher in *formation professionnelle* pupils (53%) than in the *classes supérieures* of the ESCs (47.5%) and of the ESGs (43.8%). In younger adolescents attending *classes inférieures*, the corresponding prevalence was higher in the *voie de préparation* (18.9%) than in the *voie d'orientation* (14.6%) and the ESCs (8.1%). Migration background and family structure involved smaller differences. Here again, the prevalence of drunkenness experience was lower in adolescents living with both parents and in first- and second-generation migrants than in their counterparts (for comprehensive details, see the appendix, Figure 29 and Table 5).



Findings pertaining to drunkenness experience over the last month followed rather similar patterns, although the magnitude of the observed differences was smaller. Furthermore, the relation between drunkenness and family affluence was less marked here, since the corresponding prevalence was similar in the low and medium family affluence groups (for comprehensive details, see the appendix, Figure 30 and Table 6). In total, 90.7% of the participants reported having not been drunk over the past month, against 91.1% in 2018 (Heinz et al., 2021).

Overall, the social distribution of drunkenness described above was similar to the one depicted elsewhere based on data from 2018 (Heinz et al., 2021). Notably, both waves identified a positive association between family affluence (or socioeconomic status) and drunkenness experience. The literature has reported inconsistent findings in that respect: some studies found a positive relation between these two variables (Leal-López et al., 2020); others, a negative one (Liu et al., 2018); others, no clear relation (Hanson & Chen, 2007). Qualitative studies may help clarifying the nature of the relationship between drunkenness and family affluence.

# Cigarette and e-cigarette use

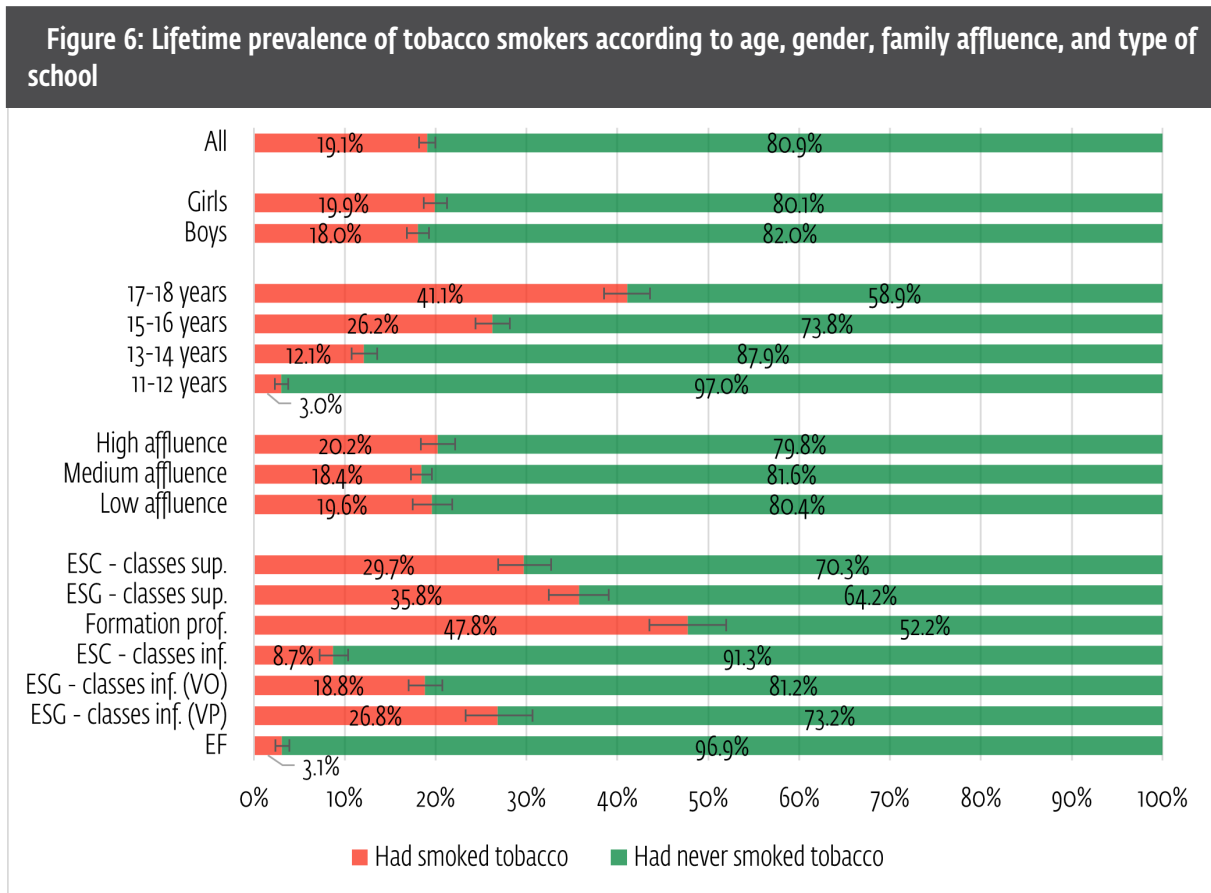
## Cigarette use

At a global level, about 1.1 billion individuals were current cigarette users in 2019 (Reitsma et al., 2021). Tobacco smoking was related to the death of 7.7 million individuals and turned out to be the highest risk factor for death in males in the same year, despite a considerable decrease in its prevalence in both sexes since the nineties (Reitsma et al., 2021). In adolescents, investigators highlighted a similar decline of the prevalence of tobacco smokers, especially in high-income countries (Warner, 2019). Because smoking tobacco usually begins during adolescence, and because the earlier a person starts smoking, the more serious the impact on health (Le Foll et al., 2022), tobacco-related diseases and mortality may, *all things being equal*, decrease from 2050 (Jha, 2020; Jha & Peto, 2014).

The HBSC survey asks adolescents to report “on how many days [they] ha[d] smoked cigarettes” in their life and over the elapsed month. In both cases, response options range from 1 (“never”) to 7 (“30 days or more”). Similarly to alcohol use, answers were recoded to distinguish (1) between the adolescents who reported having never smoked cigarettes in their life and those who reported having already smoked cigarettes, and (2) between the adolescents who reported not having smoked cigarettes over the past month, those who reported having smoked one to nine days (occasional smokers), and those who reported having smoked at least ten days (regular smokers). Figure 5 presents a flowchart with the distribution of each question.



Data from the previous waves of the HBSC study conducted in Luxembourg already identified the abovementioned decrease in the prevalence of tobacco smokers. Lifetime prevalence indeed halved between 2010 (45.7%) and 2018 (22.5%). In 2022, 19.1% of the participants indicated that they had already smoked cigarettes in their life (Figure 6). Such a prevalence varied with age, gender, family structure, and type of school. Older adolescents, girls, adolescents living with a unique parent or within a stepfamily, and attendees of ESGs and *formation professionnelle* were more likely to have already smoked at least once in their life than their respective counterparts. Family affluence and migration background were uninfluential here (for comprehensive details, see the appendix, Figure 31 and Table 7).



The prevalence of adolescents having smoked cigarettes over the past month also decreased from 26.2% in 2010 to 12.8% in 2018 (Heinz et al., 2020). In 2022, 11.4% of the surveyed adolescents reported having smoked over the elapsed month. They were almost equally distributed between occasional and regular smokers. Age, gender, family structure, and type of school were linked to tobacco smoking over the past month, following the patterns mentioned above (for comprehensive details, see the appendix, Figure 32 and Table 8). It should be noted, however, that the prevalence of regular smokers was slightly higher in boys (6.5% vs. 5.2%), and that the prevalence of occasional smokers was slightly higher in girls (6.6% vs. 4.5%). Family affluence and migration were, again, uninfluential.

Overall, the present findings are in line with the literature. Indeed, a link between family structure and cigarette use has long been highlighted (Griesbach et al., 2003; Moor et al., 2015). Similarly, the relationship between cigarette use and type of school is in line with several studies underscoring the negative association between cigarette use and cultural capital in general (i.e. an individual's set of cultural resources, knowledge, skills) and academic achievement in particular (Gagné et al., 2015; Griesbach et al., 2003; Haines et al., 2009; Moor et al., 2015). The higher the cultural capital and the academic achievement, the higher the awareness of health issues and the valorisation of healthy lifestyles. This view was corroborated by our study findings: at both the *classes inférieures* and the *classes supérieures* level, the prevalence of smokers was lower in ESC, which gathers the best-performing pupils (Lenz & Heinz, 2018), than in ESG or in *formation professionnelle*. The investigation of the relation between family affluence and tobacco smoking, however, has drawn contradictory conclusions to date: whereas some studies found a negative association between these two variables (Doku et al., 2020; Moor et al., 2015); others showed that cigarette use was poorly related to family affluence (Richter et al., 2009) but nevertheless dependent on pocket money (Moor et al., 2019).

Future research is needed to better understand whether such inconsistencies are due to methodological issues (e.g., in terms of operationalisation of target variables) or to social changes.

## E-cigarette use

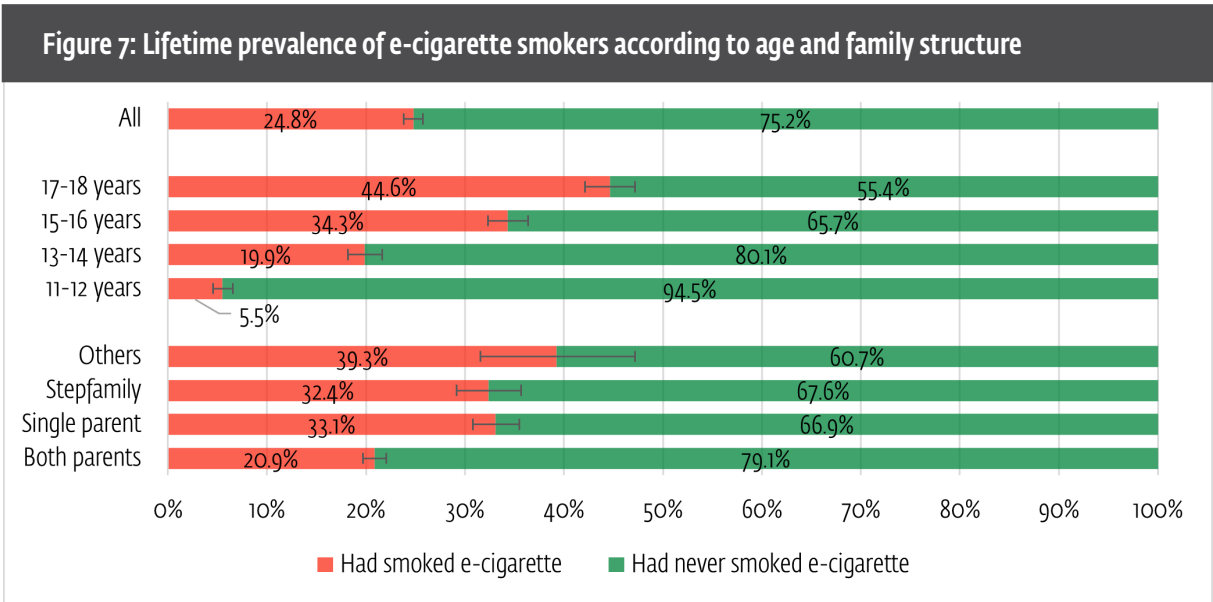
E-cigarette use has swiftly increased since the commercialisation of the item in the early two-thousands in Asia. Based on partial data, investigators reported an estimate of 68 million users over the world in 2020, including about 29 million users in the sole high income countries (Jerzyński et al., 2021). Advertised as an efficient smoking-cessation method and as healthier than cigarettes (Rom et al., 2015), the degree of safety of e-cigarettes and their potential risks for health remain debated (Gaur & Agnihotri, 2019; Jones & Salzman, 2020; Marques et al., 2021; McCoy et al., 2019; Rom et al., 2015; Williams et al., 2013). The relatively recent emergence of e-cigarettes and e-liquids prevents investigators from soundly assessing long-term consequences of such products (Becker & Rice, 2022). However, several studies have found vaping to harm the respiratory system (Falcon et al., 2020; Hamberger & Halpern-Felsher, 2020) and to be linked to seizures in adolescents (Falcon et al., 2020).

Highly popular in youth, the prevalence of e-cigarette users over the past month has increased from 1.5% in 2011 to 27.5% in US high-school pupils (Cullen et al., 2019). Similar trends have been observed in Europe, Asia, and Oceania (Becker & Rice, 2022; Tehrani et al., 2022). Several studies have examined the reasons leading adolescents to vape: mere curiosity, use by peers, tasting flavors, and quitting tobacco smoking were the most frequently reported motivations (Eichler et al., 2016; Evans-Polce et al., 2018; Kinouani et al., 2020). Importantly, the view that e-cigarette helps quitting tobacco smoking in youth may be unwarranted, since there is evidence that the use of e-cigarette is linked to an increased probability of smoking tobacco afterwards (Epstein et al., 2021; O'Brien et al., 2021; Soneji et al., 2017).

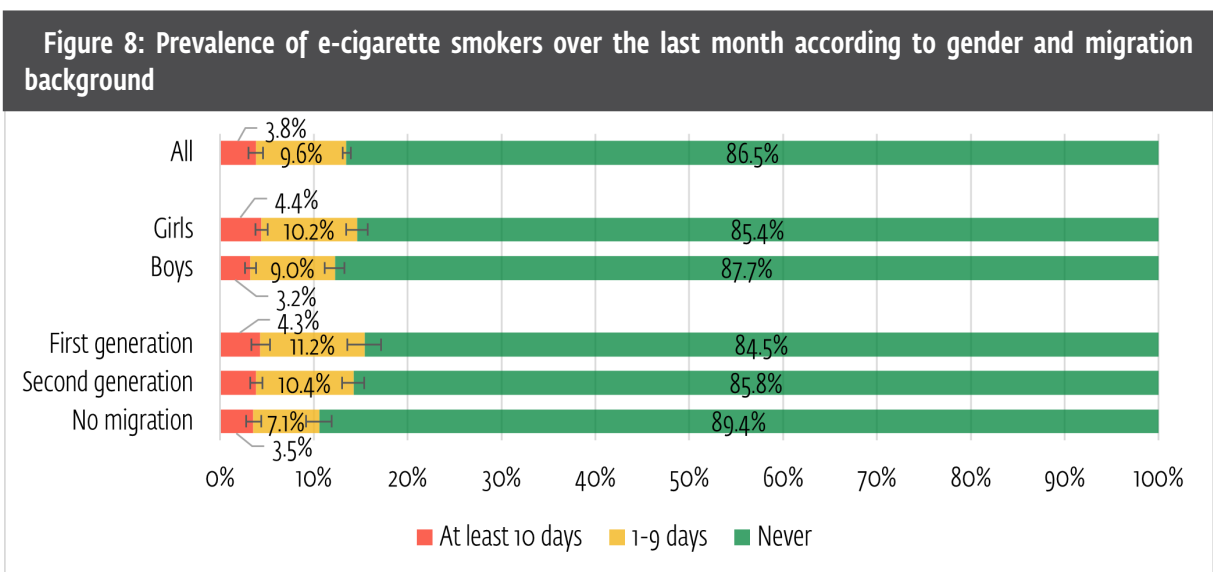
The HBSC study conducted in Luxembourg has examined e-cigarette use for the first time in 2022. The survey relied on two items asking participants to report "on how many days [they] ha[d] smoked e-cigarettes" in their life and over the elapsed month. In both cases, response options range from 1 ("never") to 7 ("30 days or more"). Similarly to tobacco smokers (Figure 5), answers were recoded to distinguish (1) between the adolescents who reported having never smoked e-cigarettes in their life and those who reported having already smoked e-cigarettes, and (2) between the adolescents who reported not having smoked e-cigarettes over the past month, those who reported having smoked e-cigarettes one to nine days (occasional e-smokers), and those who reported having smoked e-cigarettes at least ten days (regular e-smokers).

As shown in Figure 7, 24.8% of the participants reported having already vaped. Lifetime prevalence varied with all the examined sociodemographic variables, with the exception of gender. Vaping experience was positively associated with age. Such a relation was reflected in the data pertaining to the type of school attended. In both the *classes inférieures* et the *classes supérieures*, however, the prevalence of e-cigarette users was the lowest in the ESCs. Its prevalence was higher in adolescents of high affluence than in those of medium affluence. Adolescents exhibiting no migration background and living with both parents were less likely to have already vaped, compared to their counterparts (for comprehensive details, see the appendix, Figure 33 and Table 9).





Regarding the use of e-cigarettes in the previous month, 13.4% of the surveyed adolescents reported having vaped. 9.6% of respondents were occasional e-smokers and 3.8%, regular ones (Figure 8). These rates varied with the examined sociodemographic variables, with the exception of family affluence. Here again, older adolescents, attendees of ESGs and of *formation professionnelle*, first- and second-generation migrants, participants living with a unique parent or within a stepfamily were more likely to be occasional or regular e-smokers than their respective counterparts. In addition, girls reported having used e-cigarettes over the past month to a larger extent than boys. Although this gender difference was statistically significant, its magnitude was relatively small (for comprehensive details, see the appendix, Figure 34 and Table 10).



The present findings are only partly in line with the literature. For instance, they corroborated recent results from the National Youth Tobacco Survey (Azagba et al., 2023) that found no association between vaping over the past month and family affluence. The present findings also echoed previous studies revealing a protective role of living with both parents (Wills et al., 2015). However, because states of the art underscored inconsistent results pertaining to the age and gender distribution of e-cigarette use (Han & Son, 2022; Perikleous et al., 2018), comparing the present findings with past research is arduous. Notably, the link between vaping and age remains unclear to date. For example, Han and Son (2022) identified 12 studies highlighting a positive relation between age and vaping and 13 other studies stressing the absence of link between these variables. Regarding gender, most studies found boys to exhibit a higher risk of e-cigarette use (Kong et al., 2017). The extent to which the present findings are linked to national context is unclear, however. In brief, further research is needed to better understand the distribution of e-cigarette use in adolescents.

## Cannabis use and acceptability

Cannabis use has been associated, inter alia, with mood change, memory and attention impairment, problems in perceptual-motor coordination, depression, panic reactions, suicidal behaviour, and both positive (e.g., hallucinations) and negative (e.g., apathy) psychiatric symptoms (Hall & Degenhardt, 2009; Hindley et al., 2020; Volkow et al., 2016). It should be noted that the occurrence of such issues partly depends on the concentration of  $\Delta^9$ -tetrahydrocannabinol (THC), the main psychoactive constituent of cannabis, and of cannabidiol (CBD), which has been found to inhibit some of the THC adverse effects (Englund et al., 2013) and may mitigate the risk of dependence (Freeman et al., 2021).

Whether decriminalising and/or legalising cannabis use has been debated in several countries for decades (Hall et al., 2019; Hammond et al., 2020; Pisani, 1983; Volkow et al., 2016). One of the numerous critical points of such debates regards adolescents' health (Hammond et al., 2020). Because of (neuro-)developmental issues, the adverse effects of cannabis use may cause more damage in adolescents than in adults (Volkow et al., 2016).

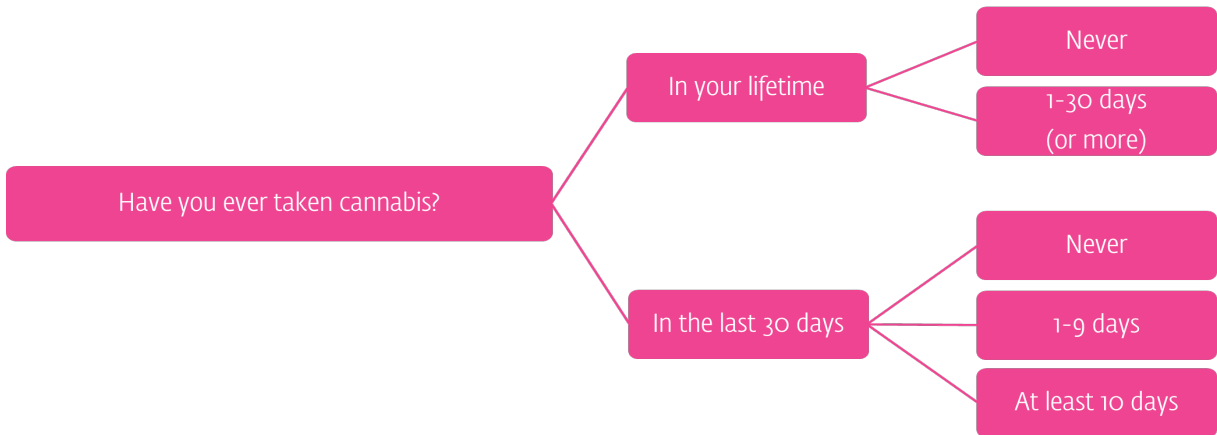
Trends in adolescents' cannabis use substantially varied as a function of the examined national context (Kraus et al., 2018). Interestingly in Luxembourg, in 15-18 years old, while lifetime prevalence decreased—albeit not in a statistically significant fashion—from about 30% in 2006 to about 27% in 2018, the prevalence of cannabis use over the past month increased from about 11% in 2006 to 13% in 2018—here, the difference was statistically significant (Heinz et al., 2020).

### Cannabis use

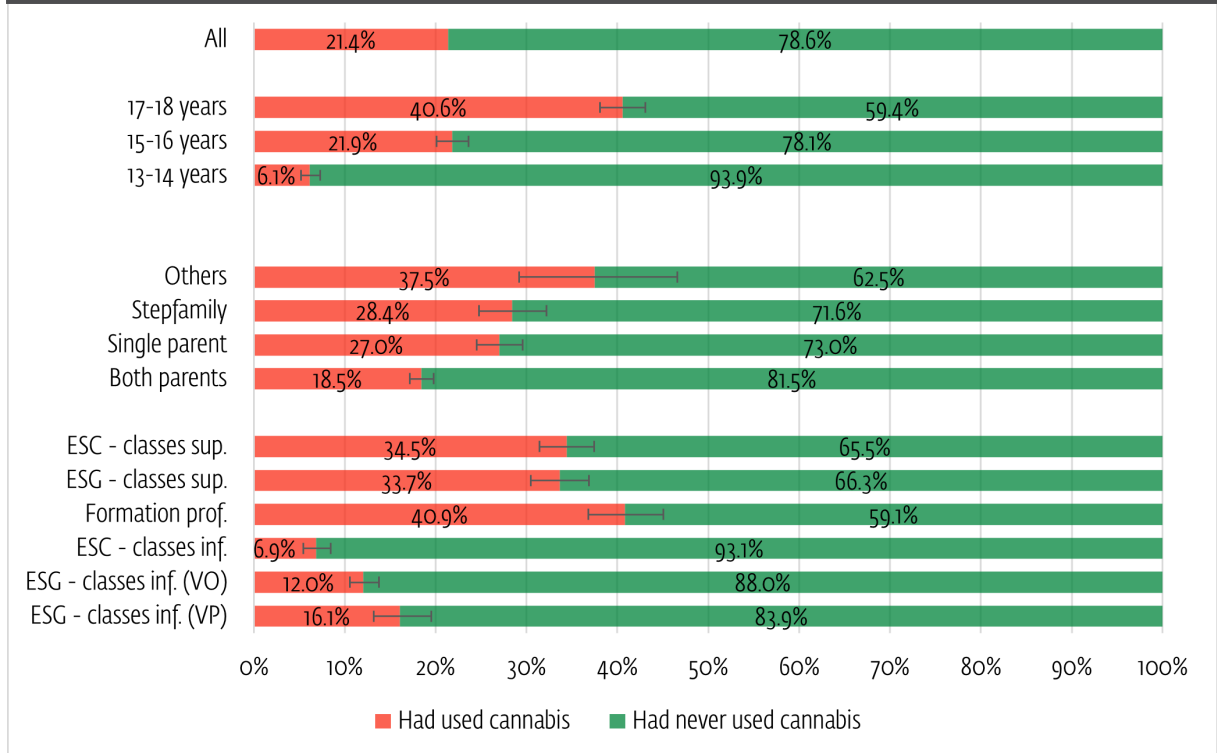
The HBSC survey assessed cannabis use based on two items asking *secondary-school attendees only* to report “ha[d] [they] ever taken cannabis” in their life and over the elapsed month. In both cases, response options range from 1 (“never”) to 7 (“30 days or more”). Answers were recoded to distinguish (1) between the adolescents who reported no such use in their life and those who did, and (2) between the adolescents who reported not having used cannabis over the past month, those who reported having used cannabis one to nine days (occasional cannabis users), and those who reported having used cannabis at least ten days (regular cannabis users). Figure 9 presents a flowchart with the distribution of each question. Because of the relatively small number of secondary-school attendees aged 11-12, the conducted analyses involved adolescents aged 13-18 only.

As shown in Figure 10, 21.4% of the respondents reported having already used cannabis. This rate was positively linked to age and varied with family structure and type of school. It was unassociated with gender, family affluence, and migration background. Lifetime prevalence was lower in adolescents living with both parents (18.5%) than in those living within a stepfamily (28.4%) or with a unique parent (27%). It was the highest in adolescents living with their grandparents or in a foster home (37.5%), however. In addition, the relationship between cannabis use and type of school partly reflected an age effect. The corresponding prevalence of cannabis was higher in pupils attending *classes supérieures* and *formation professionnelle* than among pupils attending *classes inférieures*. However, the analysis pinpointed differences within both educational levels. For instance, the lifetime prevalence of cannabis users was lower in the attendees of the *classes inférieures* of the ESCs (6.9%) than in those of the *voie de préparation* (16.1%). It was higher in *formation professionnelle* pupils (40.9%) than in ESG pupils (33.7%; for comprehensive details, see the appendix Figure 35 and Table 11). Results pertaining to cannabis use over the elapsed month involved similar patterns (for comprehensive details, see the appendix, Figure 36 and Table 12).

**Figure 9: Categorisation of cannabis use according to lifetime and last month**



**Figure 10: Lifetime prevalence of cannabis use according to age, family structure, and type of school**

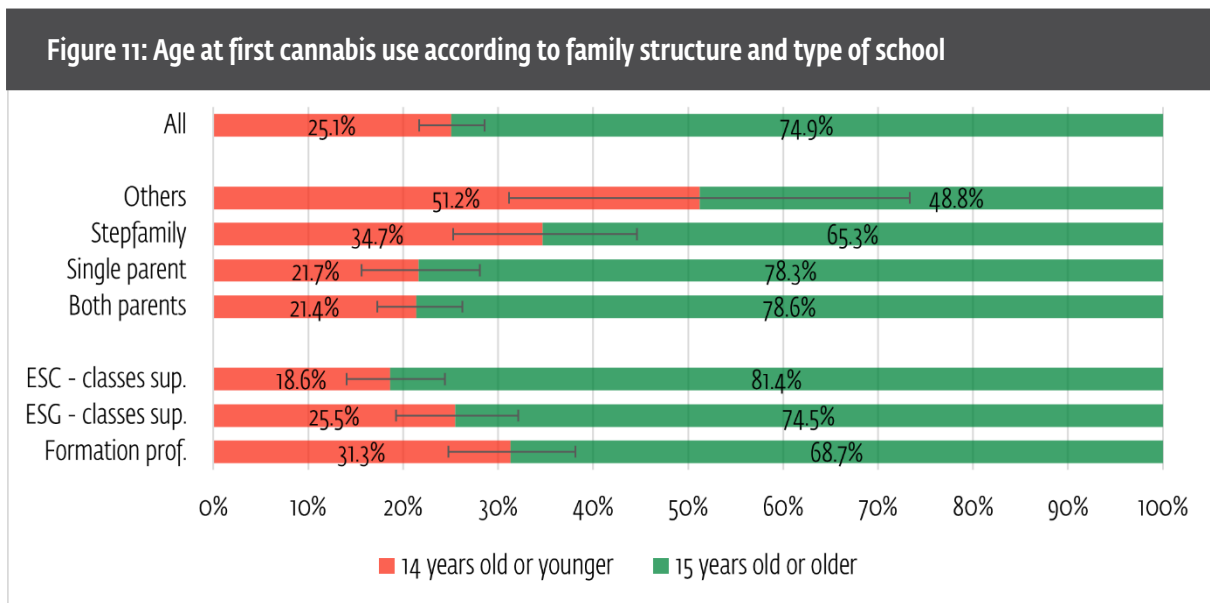


The social distribution of cannabis use has slightly changed from 2018 to 2022. Notably, while boys are still more likely to be regular users than girls, gender differences in the prevalence of occasional users have vanished over this period (Heinz et al., 2021). In a similar vein, the link between family affluence and cannabis use over the past month identified in 2018 was not retrieved in 2022 (Heinz et al., 2021). In addition, the present findings pinpointed no link between cannabis use and family affluence. This result corroborates the view that such a use is no more associated with high affluence (Belardinelli et al., 2022; Bogt et al., 2014). However, it should be noted the higher prevalence of regular users in *voie de préparation* and *formation professionnelle* pupils suggest a potential association between such a use and cultural capital.

### Age at first use of cannabis

Participants were also asked to specify how old they were at their first cannabis use. A 1-9 point scale was used. It ranged from 1 ("I have never used cannabis"), 2 ("11 years old or younger") to 9 ("18 years old or older"). Answers were recoded dichotomously to identify early users, excluding those who have never consumed it. A quartile-based split was employed, resulting in identifying age 14 as cut-off value. The following analyses involved attendees aged 17-18 only in order not to inflate earlier consumption.

From those who reported to have used cannabis, 25.1% reported to have used cannabis for the first time when they were 14 years old or younger (Figure 11). This rate was unrelated to gender, family affluence, and migration background. However, it was higher in the adolescents assigned to the category "others" (i.e., adolescents living with their grandparents or in a foster home; 51.2%) and in those living within a stepfamily (34.7%) than in those living with a unique parent (21.7%) or with both parents (21.4%). This prevalence was also higher in *formation professionnelle* pupils (31.3%) and in those attending the *classes supérieures* of the the ESCs (25.5%) than in the pupils attending the *classes supérieures* of the the ESCs (18.6%; for comprehensive details, see the appendix, Figure 37 and Table 13).

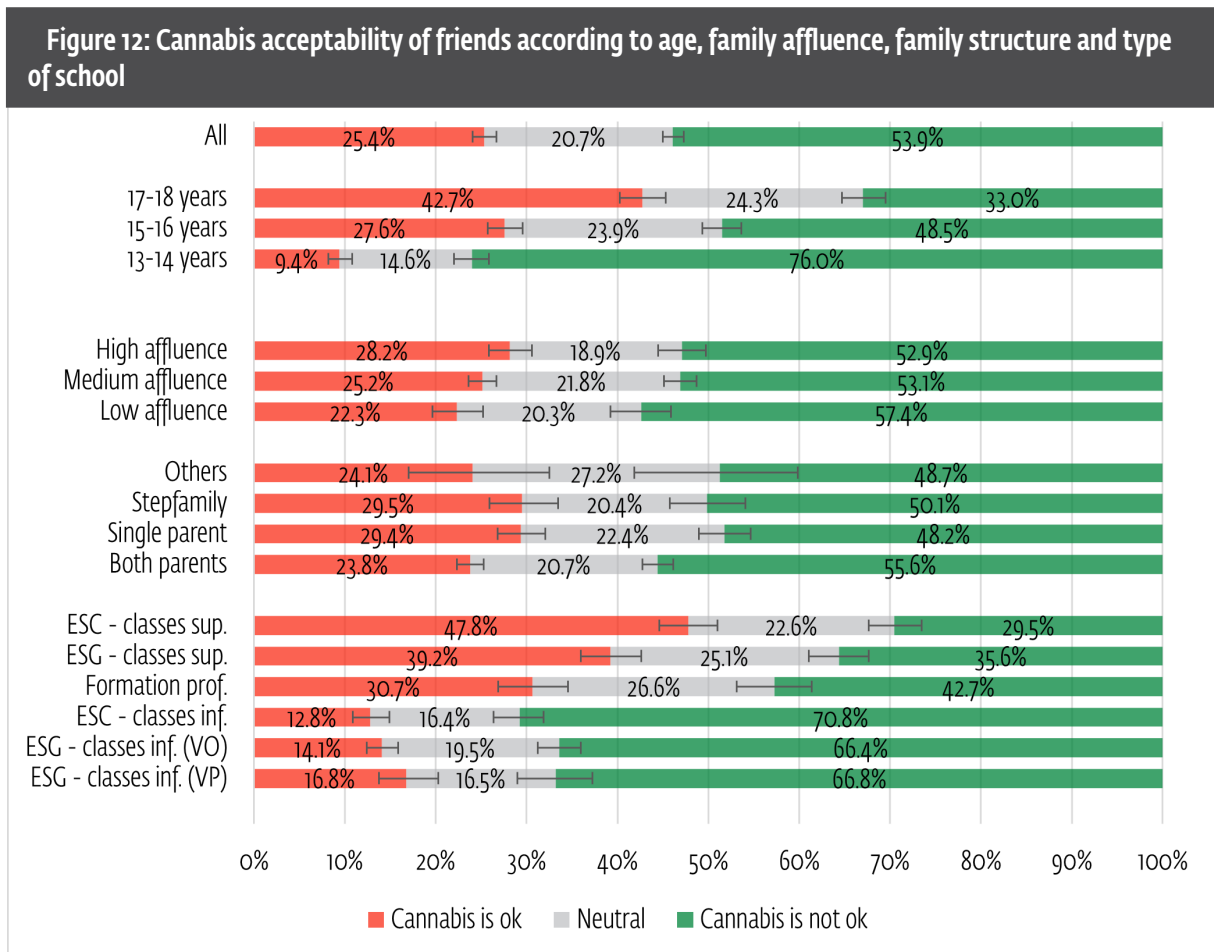


### Cannabis acceptability

The HBSC survey comprised three items dedicated to cannabis acceptability asking secondary-school attendees whether their friends, their parents, and themselves "think that it is ok to use cannabis." Each item relied on a 1-5 rating scale ranging from "1 strongly agree" to "1 strongly disagree". Answers were recoded in three categories: "disagree", "neutral", and "agree". The analyses carried out involved secondary-school pupils aged 13-18.

The majority of respondents (53.9%) indicated that their friends had a poor cannabis acceptability; 25.4%, that their friends considered acceptable to use cannabis (Figure 12). Although those rates varied with all the examined sociodemographic variables, age, family affluence, family structure, and type of school involved the largest associations. Friends of younger adolescents, of adolescents of low family affluence, of those living with both parents,

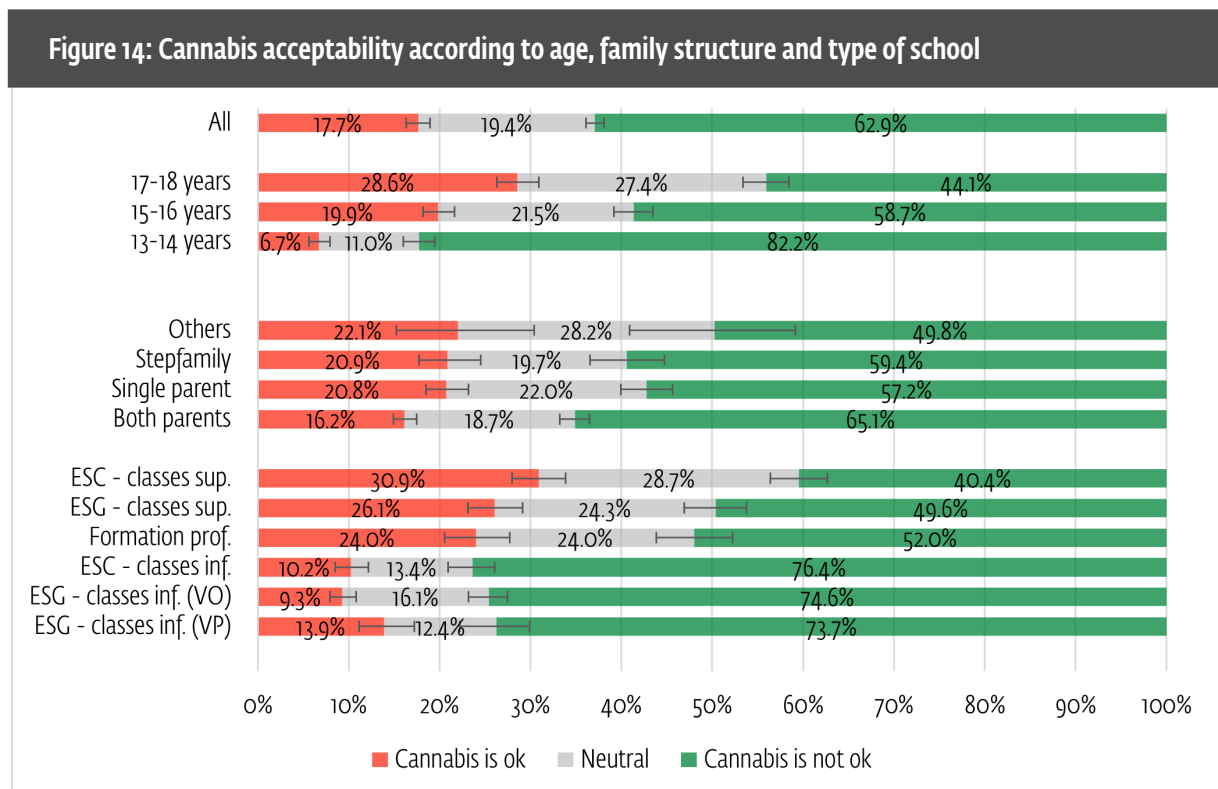
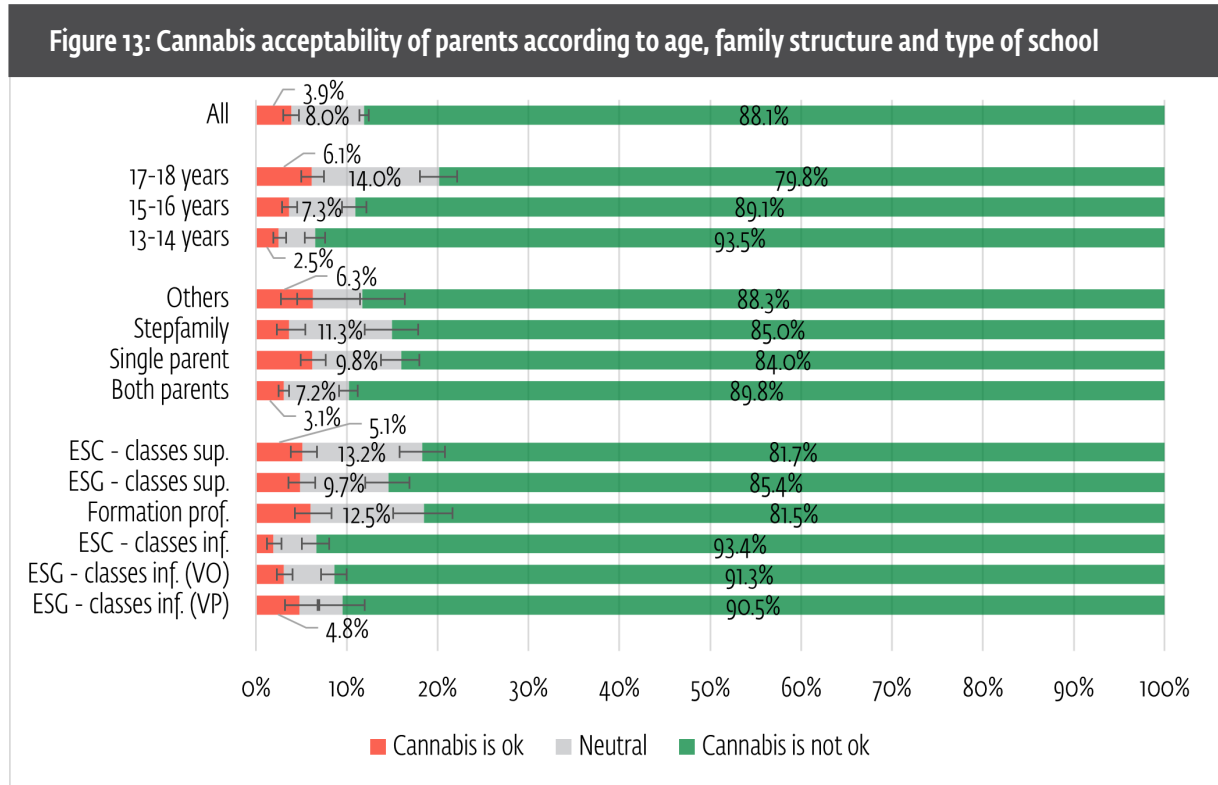
and friends of attendees of the lower grades and of ESC pupils were more likely to have a lower cannabis acceptability than friends of their respective counterparts (for comprehensive details, see the appendix, Figure 38 and Table 14).



Parents' cannabis acceptability involved a dissimilar pattern of answers. 88.1% of the respondents indicated that their parents had a poor cannabis acceptability; 3.9%, that their parents considered cannabis use as acceptable (Figure 13). Such a prevalence varied only with age, family structure, and type of school. Parents of younger adolescents, of respondents living with both parents, and of lower-grade attendees were more likely to negatively consider cannabis use than the parents of their respective counterparts (for comprehensive details, see the appendix, Figure 39 and Table 15).

As shown in Figure 14, 62.9% of the respondents reported themselves a poor acceptability of cannabis use. The latter varied with all the considered sociodemographic variables, with the exception of family affluence. Again, age, family structure, and type of school involved the largest associations. For instance, 82.2% of the respondents aged 13-14 reported a poor cannabis acceptability, against 44.1% of the respondents aged 17-18. Among attendees of higher grades, pupils in *formation professionnelle* were the most prone to reject cannabis, whereas they were also the most prone to use the substance (for comprehensive details, see the appendix, Figure 40 and Table 16).

Finally, it should be noted that cannabis acceptability in respondents, respondents' friends, and respondents' parents were positively correlated with each other. Relying on the original variables (i.e., those involving 1-5 point rating scales) and on Kendall's tau, the correlation coefficient between (a) friends' and respondents' acceptability was .673, (b) parents' and respondents' acceptability was .493, and (c) friends' and parents' acceptability was .418.



## Sexual intercourse and contraception

Although sexual intercourse does not represent per se a risk behaviour, its associations with unwanted pregnancy and sexually transmitted infections (STIs) invite to monitor its prevalence and to assess contraceptive use in youth. Indeed, unintended pregnancy in adolescents is linked to obstetrical risks (Kawakita et al., 2016; Kirbas et al., 2016), social stigmatisation (Moseson et al., 2019), development of mental health issues (SmithBattle & Freed, 2016; van Lieshout et al., 2020), and to a higher risk for child's neglect and abuse (McCracken & Loveless, 2014; Paúl & Domenech, 2000; Riva Crugnola et al., 2019). Moreover, whether viral or bacterial, STIs are linked to about 1 million new infections each day and to about 2 million deaths each year, globally (World Health Organization, 2021). Adolescents and young adults have long been found to be at higher risk for STIs (Dehne & Riedner, 2001; World Health Organization, 2021), and the recent increase in the prevalence of STIs in youth in several countries is of the utmost concern (Shannon & Klausner, 2018).

In addition, research has identified associations between early sexual intercourse and adverse outcomes, including short-to-medium term depression, especially in girls (Vasilenko, 2017) and STIs (Vasilenko, 2022). It should be noted, however, that no consensus has been reached regarding which cut-off should be employed to discriminate between an "early," a "standard," and a "late" sexual intercourse (Zhu & Bosma, 2019). Investigators have indeed relied on different cut-off points to create such categories, with studies using a cut-off of 14 (Roman Lay et al., 2021), of 16 (Jovic et al., 2014), or even of 18 years old (Turi et al., 2020).

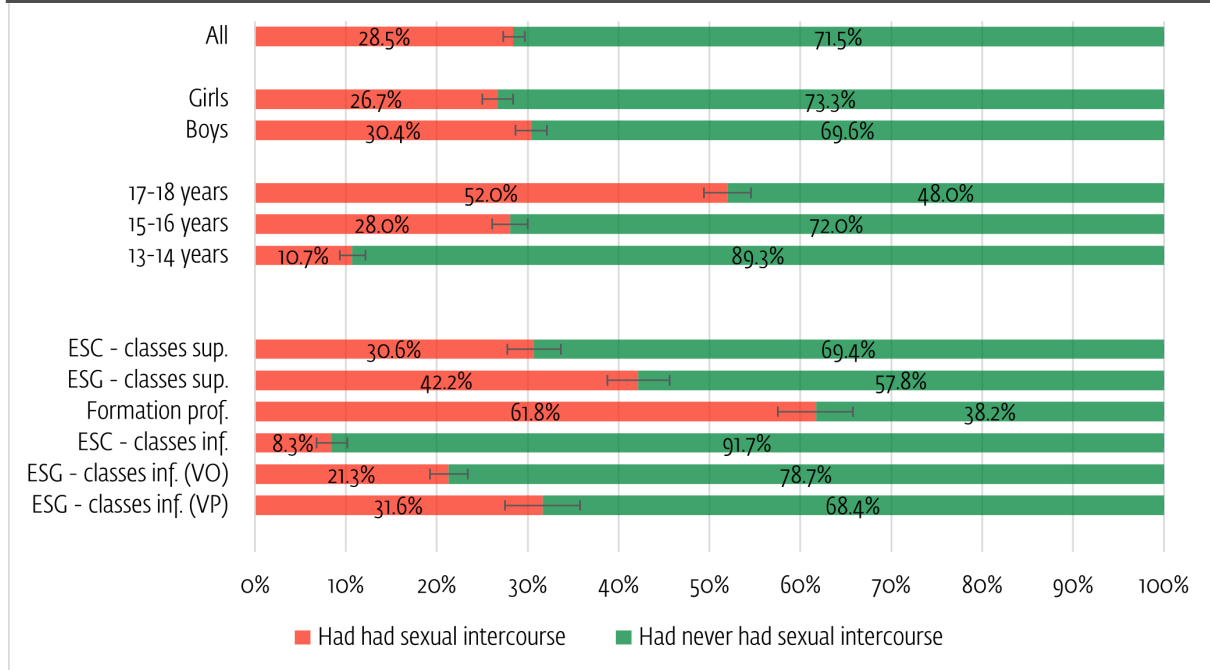
### Sexual intercourse

The HBSC survey asked secondary-school attendees to indicate whether they had already had sex based on a yes/no question. The conducted analyses involved respondents aged 13-18 only. As shown in Figure 15, the prevalence adolescents reporting having already had sex was 28.5%. It was positively associated with age, with a majority of 17-18-year-old participants indicating they had already had sex. Such a prevalence was also linked to gender, family structure, migration background, and type of school. Boys, first-generation migrants, and adolescents living within a stepfamily or with a unique parent appeared more likely to have already had sexual intercourse than their respective counterparts. Sexual intercourse was also associated with the type of school attended: for instance, the corresponding prevalence was the highest in *formation professionnelle* pupils (61.8%) and the lowest in participants attending the *classes inférieures* of the ESCs (8.3%). It was similar in *voie de préparation* pupils (31.6%) and in those attending the *classes supérieures* of the ESCs (30.6%). Family affluence was not related to sexual intercourse (for comprehensive details, see the appendix, Figure 41 and Table 17).

Compared to 2018, two differences in the social distribution of the adolescents reporting having had sex are worth noticing. First, while the prevalence of pupils reporting having had sexual intercourse was higher in pupils of low family affluence than in their counterparts in 2018, family affluence was no more related to sexual intercourse in 2022. Second, the corresponding prevalence has increased in *voie de préparation* pupils between 2018 (27.5%) and 2022 (31.6%) and has been rather stable in the other types of school (Heinz et al., 2021).



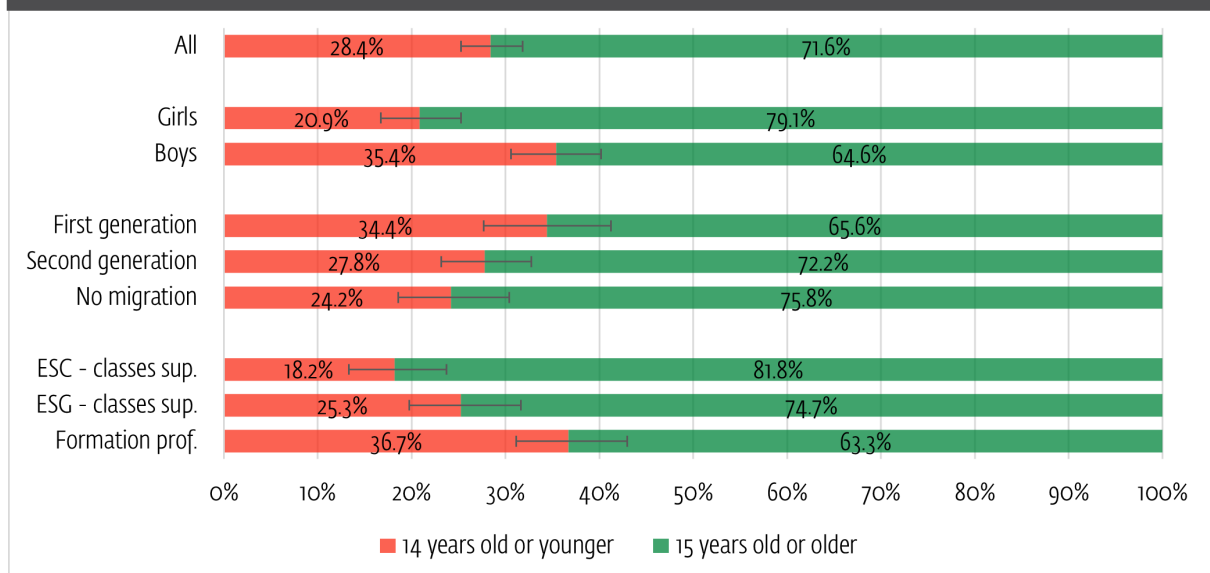
**Figure 15: Prevalence of adolescents having had sexual intercourse according to gender, age, and type of school**



### Age at first sexual intercourse

The respondents who reported having had sex were also asked to specify how old they were at their first sexual intercourse on a scale ranging from 1 ("11 years old or younger") to 6 ("16 years old or older"). The analysis carried out involved 17-18-year-old respondents only. Early sexual intercourse was defined using a quartile-based split. The identified cut-off value was 14 years old. This means that a sexual intercourse at age 14 or before was considered as an "early" one, here.

**Figure 16: Age at first sexual intercourse according to gender, migration background, and type of school**

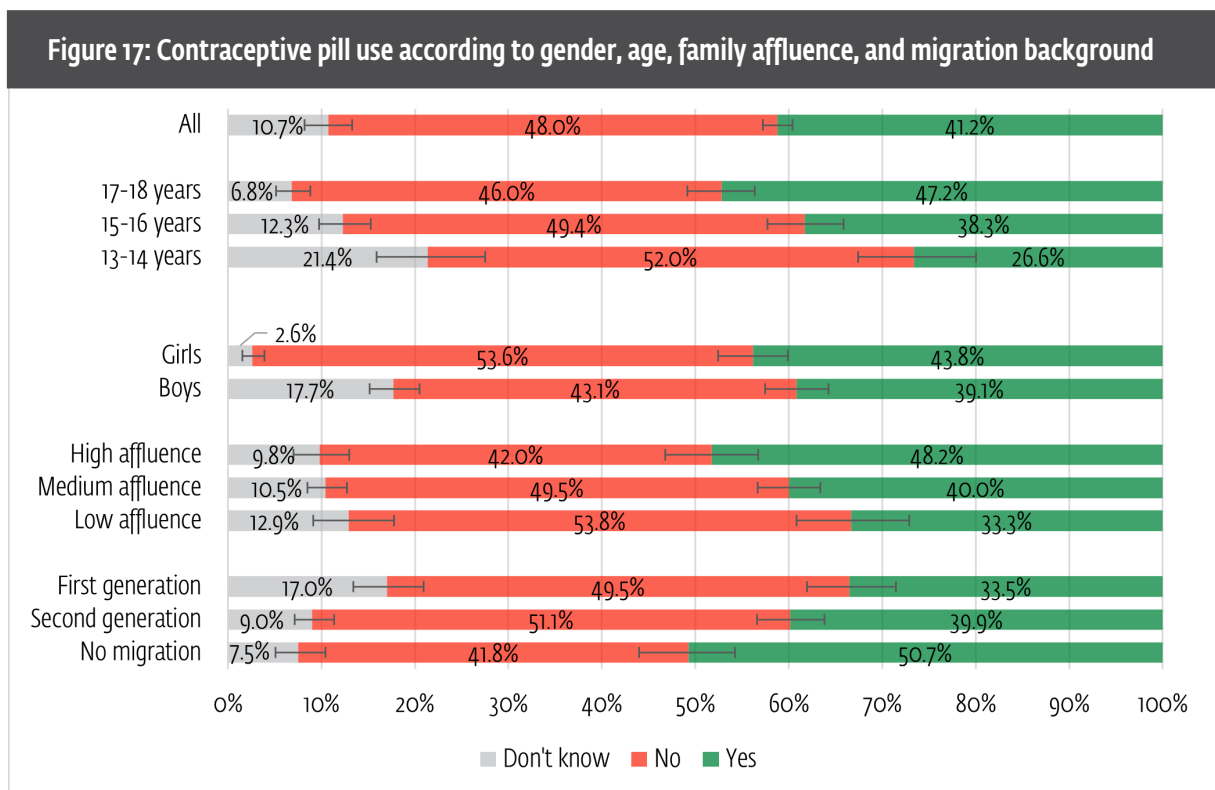


Of the 17-18-year-old adolescents who had already had sex, 28.4% were aged 14 or younger at their first sexual intercourse (Figure 16). The corresponding prevalence was higher in boys and first-generation migrants than in their counterparts. Moreover, such a prevalence was higher in *formation professionnelle* pupils than in attendees of the *classes supérieures* of the ECSs and ESGs. Family affluence and family structure were uninfluential here (for comprehensive details, see the appendix, Figure 42 and Table 18).

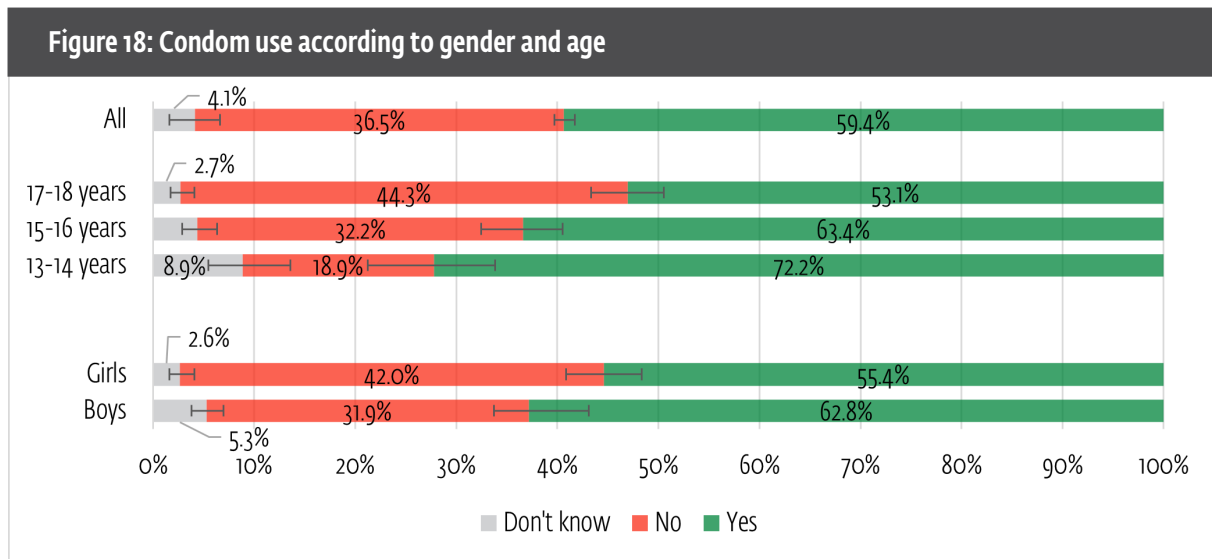
## Contraception

Contraception was measured based on two items asking participants reporting having already had sex to indicate whether their partner or themselves use contraceptive pill and/or a condom the last time they had sexual intercourse. Both items relied on three response options: "yes," "no," and "I do not know." While these items exclude other contraceptive methods (e.g., diaphragm), they still provide an overview of contraceptive use in adolescents. The analysis carried out here involved participants aged 13-18 who reported having already had sexual intercourse.

As shown in Figure 17, 41.2% of the concerned participants indicated that their partner or themselves used contraceptive pill the last time they had sexual intercourse; 48%, that their partner or themselves did not use it; 10.7%, that they did not know. Such rates varied with all the examined sociodemographic variables. The prevalence of contraceptive pill use was lower in the feedback from younger adolescents, boys, adolescents of lower family affluence, first-generation migrants, respondents living with both parents, and in pupils of lower grades than in their counterparts. Overall, the same applied to the distribution of the response option "I do not know." For instance, 2.6% of the concerned girls indicated no knowledge or no memory in that respect, against 17.7% of the concerned boys (for comprehensive details, see the appendix, Figure 43 and Table 19).



Regarding condom use, 59.4% of the concerned respondents indicated that their partner or themselves used it the last time they had sexual intercourse; 36.5%, that their partner or themselves did not; 4.1%, that they did not know (Figure 18). The social distribution of condom use followed a rather similar pattern than the one pertaining to contraceptive pill use. All sociodemographic variables were linked to condom use. However, differently than in the case of contraceptive pill use, age was negatively associated with condom use: younger adolescents reported condom use to a larger extent than older adolescents. For instance, the corresponding prevalence was 72.2% in adolescents aged 13-14, against 53.1% in those aged 17-18. Interestingly, such a prevalence was higher in boys (62.8%) than in girls (55.4%), a gap that might reflect a social desirability bias and/or signal that a number of girls' sexual partners were not males nor current secondary-school attendees, or maybe because older girls have access to the contraceptive pill leading to a reduction in the use of condoms during sexual intercourse. Because this gender gap is the highest in adolescents aged 17-18 and the lowest in those aged 13-14, this latter possibility may mainly explain why the prevalence of condom use was lower in girls. It is also worth noting that boys were twice more likely than girls not to know if a condom was used during the last sexual intercourse (5.3% of boys vs 2.6% of girls). In addition, the prevalence of condom use was higher in participants of higher family affluence, second-generation migrants, and in adolescents living with both parents than in their counterparts. The prevalence of condom use also varied with type of school, reflecting an age effect as well as a distinction between ESG and ESC pupils. Overall, the social distribution of contraceptive method use observed in 2022 was similar to the one observed in 2018 (for comprehensive details, see the appendix, Figure 44 and Table 20).



## Problematic use of social media

The emergence of the so-called “cyber-era” has generated its share of negative outcomes impacting health in general, and insomnia, self-esteem, anxiety, and depression levels in particular (Keles et al., 2020; Riehm et al., 2019; Woods & Scott, 2016). Researchers have notably investigated the ins and outs of social media addiction and created several tools to assess it, such the Bergen Social Media Addiction Scale (Andreassen et al., 2017).

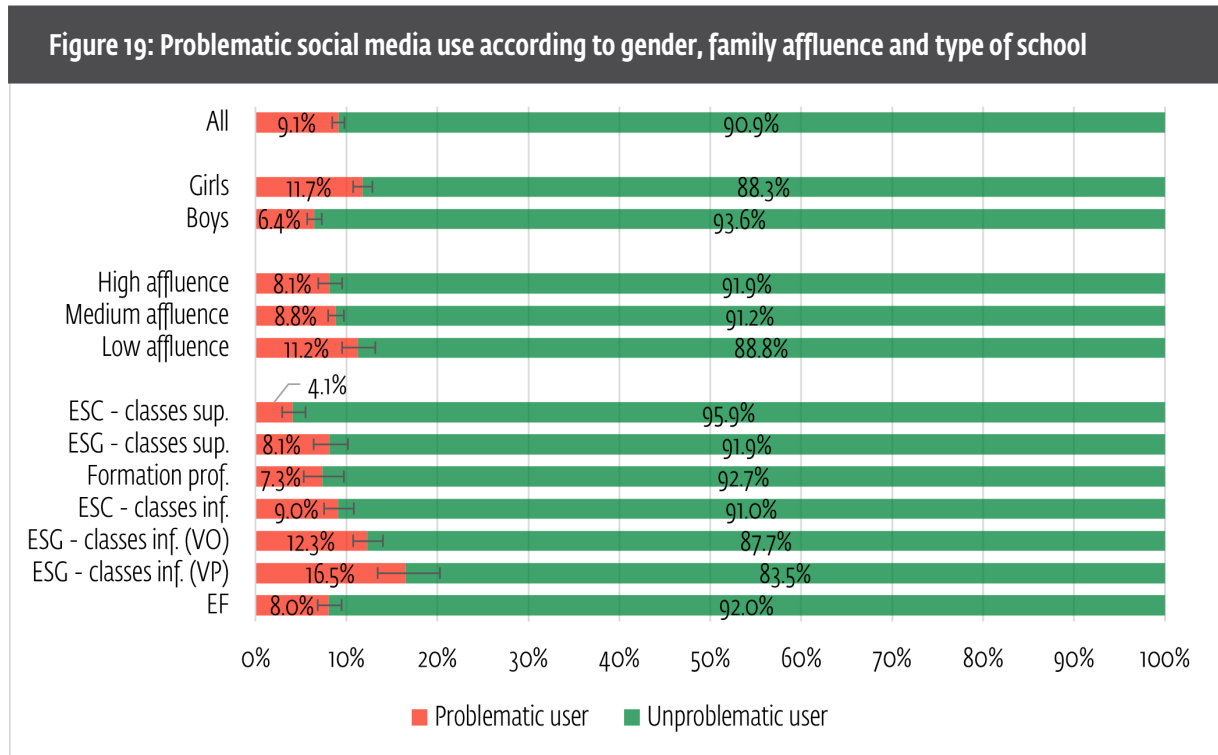
Since 2018, the HBSC study has included the Social Media Disorder Scale (van den Eijnden et al., 2016). This tool covers the previous year and comprises nine items asking respondents whether they...:

- “regularly found that you can't think of anything else but the moment that you will be able to use social media again;”
- “regularly felt dissatisfied because you wanted to spend more time on social media;”
- “often felt bad when you could not use social media;”
- “tried to spend less time on social media, but failed;”
- “regularly neglected other activities (e.g. hobbies, sport) because you wanted to use social media;”
- “regularly had arguments with others because of your social media use;”
- “regularly lied to your parents or friends about the amount of time you spend on social media;”
- “often used social media to escape from negative feelings;”
- “had serious conflict with your parents, brother(s) or sister(s) because of your social media use.”

Response options are dichotomous; the answer “no” is coded 0, an answer “yes” is coded 1. A sum score ranging from 0 to 9 is then created on that basis. The creators of the scale considered a score of 5 or more as reflecting a “disordered social media user” (van den Eijnden et al., 2016). A more recent study considered a score of 6 or more to identify such users (Boer et al., 2022). It should be noted that both thresholds have no clinical underpinnings and that future studies may revise the cut-off value in question. In accordance with the HBSC internal protocol (Inchley et al., 2023), a cut-off of 6 was retained in the analysis conducted here.

As shown in Figure 19, 9.1% of the participants were problematic social media users. This rate varied with all the considered sociodemographic variables. The percentage of problematic users was the highest in 13-14-year-old adolescents (12.5%) and the lowest in 17-18 year olds (6.1%). This age trend was reflected in the association between problematic use of social media and type of school, with an additional line of demarcation distinguishing ESG pupils from ESC pupils. The prevalence of problematic users was indeed higher in ESG than in ESC in both lower and higher

grades. It was also higher in girls and in respondents of low family affluence than in their respective counterparts. Moreover, living with both parents and exhibiting no migration background appeared to play a protective role against social media disorders (for comprehensive details, see the appendix, Figure 45 and Table 21).



Problematic use of social media

The prevalence of problematic social media users has increased between 2018 (5.9%) and 2022 (9.1%). While this rise concerned each single sociodemographic subgroup, it was higher in those subgroups reporting the highest prevalence of problematic users (Heinz et al., 2021). For instance, an increase of 5.2 and 1.6 percentage points was found in girls and boys, respectively. As a result, all the abovementioned gaps have increased over the past four years.

# Bullying and physical fighting

## Bullying

Bullying is a worldwide phenomenon, the prevalence of which dramatically differs from one region to the other, however. As an illustration, Biswas et al. (2020) found that about 43% of African adolescents aged 12-17 had been bullied over the elapsed month, against about 8% of European adolescents. Such a *relatively* low prevalence in Europe should not lead to overlook bullying victimisation: the latter is indeed associated with a large number of negative outcomes, including psychopathology, suicidality, and delinquency (Catone et al., 2015; Klomek et al., 2015).

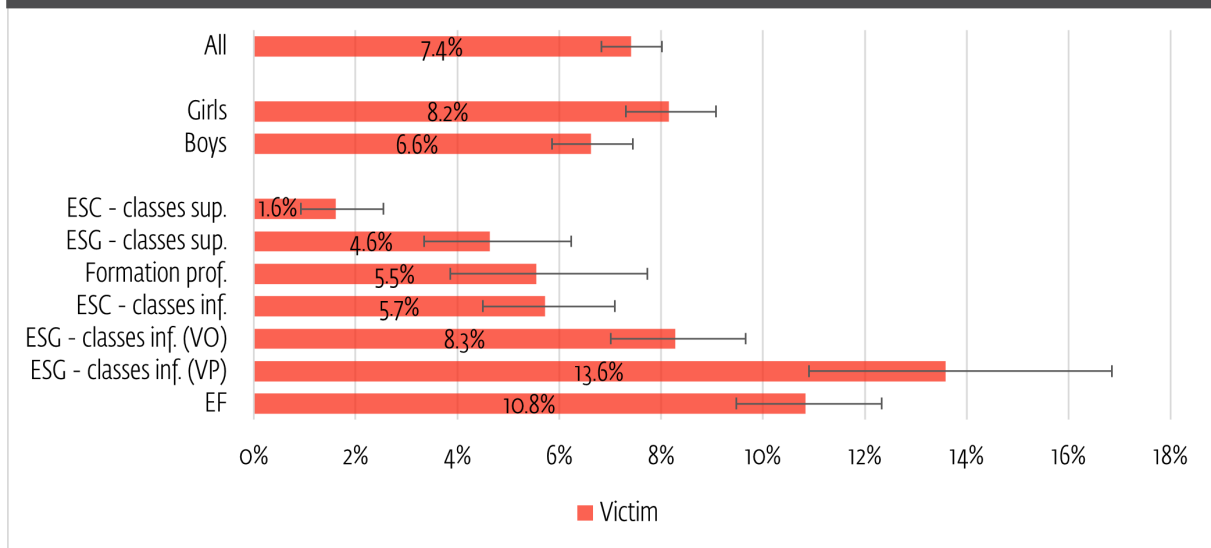
The HBSC survey assesses bullying based on four distinct items examining both in-school and cyberbullying victimisation and perpetration. Because the term “bullying” is not easily translatable in several languages, the questionnaire provided participants with a definition of bullying as well as with some practical examples. Adolescents were then asked to indicate how often they had been bullied and how often they had bullied someone, both at school and online. The four items covered the past couple of months and relied on a 1-5 point rating scale ranging from 1 (“I have not”) to 5 (“several times a week”). Answers were recoded to distinguish between victims and non-victims and between perpetrators and non-perpetrators. Following the HBSC internal protocol (Inchley et al., 2023), the response options “I have not” and “once or twice” were recoded 0; the options “two or three times a month”, “about once a week”, and “several times a week” were recoded 1 when assessing in-school victimisation. The response option “I have not” was recoded 0; the four other options were recoded 1 when assessing cyberbullying victimisation.

## Bullying victimisation

The prevalence of bullying victims was higher online than at school (13.1% vs. 7.4%). In-school bullying victimisation appeared mainly associated with the type of school attended (see Figure 20). All sociodemographic variables considered, the prevalence of in-school bullying victimisation reached its maximum in the *voie de préparation* of the ESGs (13.6%) and its minimum in the *classes supérieures* of the ESCs (1.6%). Although these findings largely reflect an age effect (Cook et al., 2010), they may also manifest specific schools’ characteristics and dynamics. In addition, the prevalence of bullying victimisation at school was (slightly) higher in girls than in boys. This is a first since the implementation of the HBSC study in Luxembourg. Indeed, bullying victimisation was higher in boys in 2006 and 2010 and was rather similar in both genders in 2014 and 2018 (Heinz et al., 2020). This result may partly echo the trends reported elsewhere (Kennedy, 2021) that highlighted a decrease in face-to-face bullying victimisation in boys and an increase in girls between 1998 and 2017 in the US. On a different note, the analysis identified a link between bullying victimisation at school and family structure: living with both parents turned out to play a protective role. In-school bullying victimisation was unrelated to family affluence and migration background (for comprehensive details, see the appendix, Figure 46 and Table 22). The social distribution of bullying victimisation at school has not changed between 2018 and 2022 (Heinz et al., 2021) and echoed previous findings (Inchley et al., 2020).

Regarding cyberbullying, 13.1% of the participants reported having been cyberbullied over the past couple of months. This prevalence varied with age, family structure, and type of school, following similar patterns than those described above, with one exception: indeed, the prevalence of cyberbullying victims was higher in adolescents aged 11-14 than in those aged 15-18.(for comprehensive details, see the appendix, Figure 47 and Table 23).

Figure 20: Bullying victimisation at school according to gender and type of school

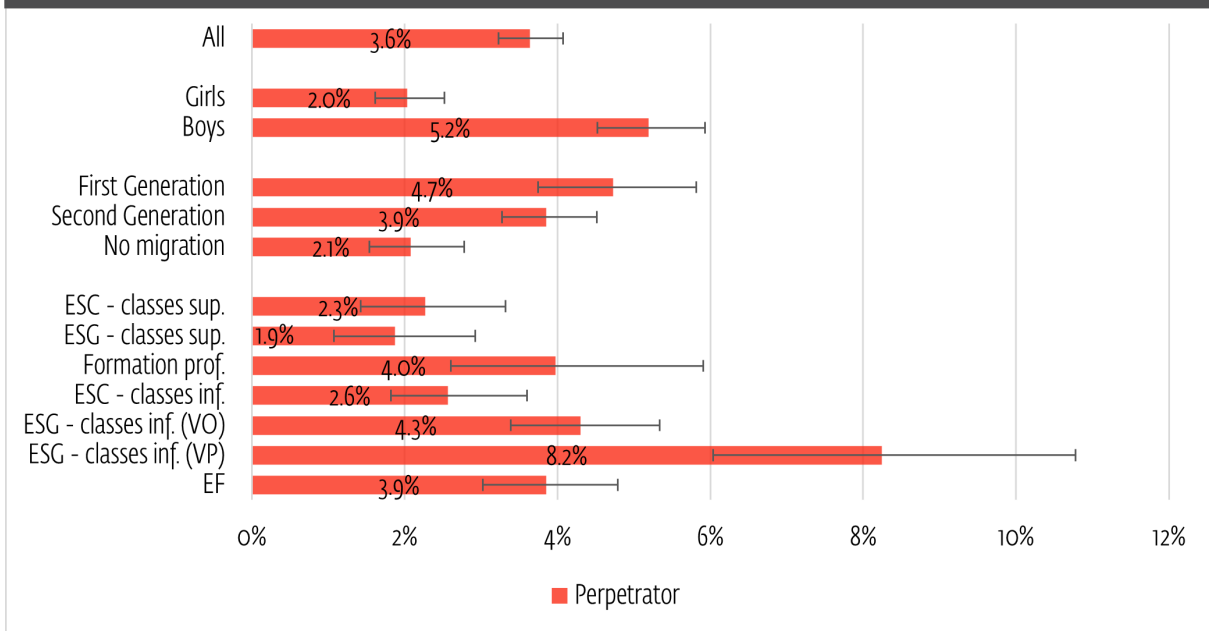


### Bullying perpetration

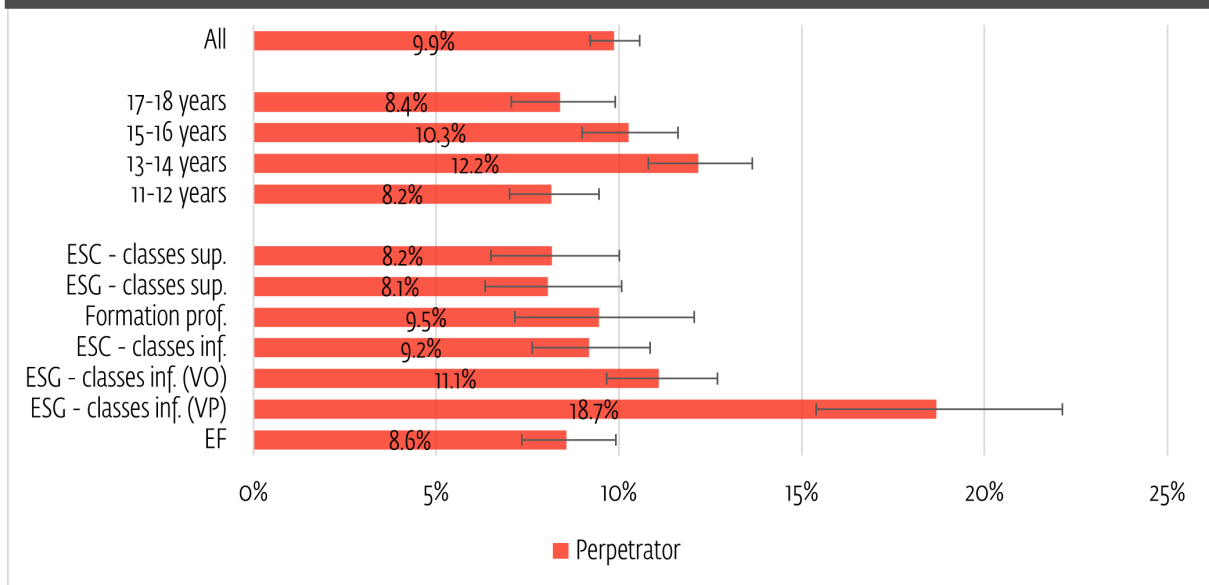
As shown in Figure 21, 3.6% of the participants reported to have perpetrated bullying at school over the past couple of months. Such a rate varied with all the sociodemographic variables examined, with the exception of age. Type of school, gender, and migration status involved the largest differences in that respect. The prevalence of perpetrators reached 8.2% in the *voie de préparation* of the ESGs and 1.9% in the *classes supérieures* of the ESGs. 5.2% of the surveyed boys and 2% of the surveyed girls reported to have been bullies. First- and second-generation migrants appeared more likely to bully (4.7% and 3.9%, respectively) than participants with no migration background (2.1%). The two other sociodemographic variables involved smaller differences. The link between family affluence and bullying perpetration at school was mainly due to the difference between the low (4.6%) and medium (3.2%) groups. In a similar vein, the association between in-school bullying perpetration and family structure was chiefly reflective of the relatively high prevalence of perpetrators in participants living with a unique parent (5%), compared to the rates of bullies in adolescents living with both parents (2.8%) or within a stepfamily (2.9%; for comprehensive details, see the appendix, Figure 48 and Table 24). The social distribution of bullying perpetration at school was similar in 2018 and 2022 (Heinz et al., 2021) and is in line with the one reported in past research (Inchley et al., 2020).

The prevalence of bullies was higher online than at school (9.9% vs. 3.6%). Just as in-school bullies, cyberbullying perpetrators prevailed in the *voie de préparation* of the ESGs (18.7%), in boys (12.5%), and in first-generation migrants (11.7%; see Figure 22 and the appendix, Figure 49 and Table 25). Living with both parents was associated with a lower prevalence of cyberbullies (8.7%) than living with a unique parent (11.6%) and living within a stepfamily (11.7%). Interestingly, the analysis identified age differences, with 13–14 year old participants exhibiting the highest prevalence of perpetrators (12.2% vs. 8.2% in 11–12 year olds). Family affluence was uninfluential here (for comprehensive details, see the appendix, Figure 49 and Table 25).

**Figure 21: Bullying perpetration at school according to gender, migration background, and type of school**



**Figure 22: Cyberbullying perpetration according to age and type of school**



## Physical fighting

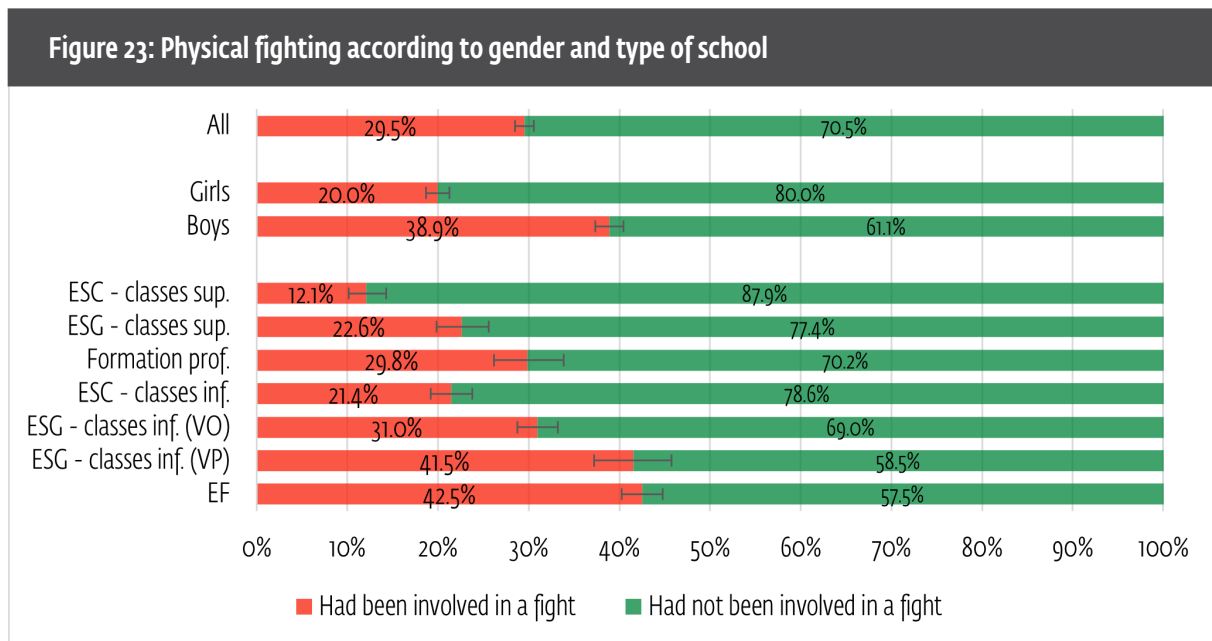
Bullying is a protean phenomenon comprising verbal (e.g., name calling), physical (e.g., pushing), and relational (e.g., rumour spreading) subtypes (Olweus, 1993; Rivers & Smith, 1994). The HBSC study does not allow one to distinguish between these subtypes. It includes, however, an item assessing involvement in physical fights. The latter should not be conflated with the physical form of bullying, since it does not necessarily involve power imbalance—a key



characteristic of bullying. This partly explains why involvement in physical fights was only weakly correlated with bullying victimisation ( $\tau = .146$ ) and perpetration ( $\tau = .202$ ).

Within the HBSC survey, involvement in physical fights is measured by asking participants to indicate how many times they were involved in such a fight over the past year. The item relies on a 1-5 point rating scale ranging from 1 (“none”) to 5 (“at least four times”). To differentiate adolescents having not been involved in a fight from those who had had, the response option “none” was recoded 0 and the other response options, 1.

As shown in Figure 23, 29.5% of the respondents reported having been involved in a fight over the elapsed year. This rate varied with each single examined sociodemographic variable. Younger adolescents, boys, adolescents of low family affluence, first- and second-generation migrants, participants who did not live with both parents were more likely to have been involved in a fight than their respective counterparts. In addition, the analysis revealed at least two levels in the association between physical fight and type of school. The first level relates to age: the prevalence of physical fight was indeed higher in *enseignement fondamental* and in the *classes inférieures* than in the *classes supérieures*. The second level reflects a distinction between ESGs and ESCs: the latter exhibited a lower prevalence of physical fight than the former (for comprehensive details, see the appendix, Figure 50 and Table 26).



The social distribution of the prevalence of physical fighting has not substantially evolved since 2018. The main difference regards family affluence. In 2018, pupils of high family affluence were less likely to be involved in such fights than their counterparts (Heinz et al., 2021); in 2022, family affluence was unrelated to physical fight.

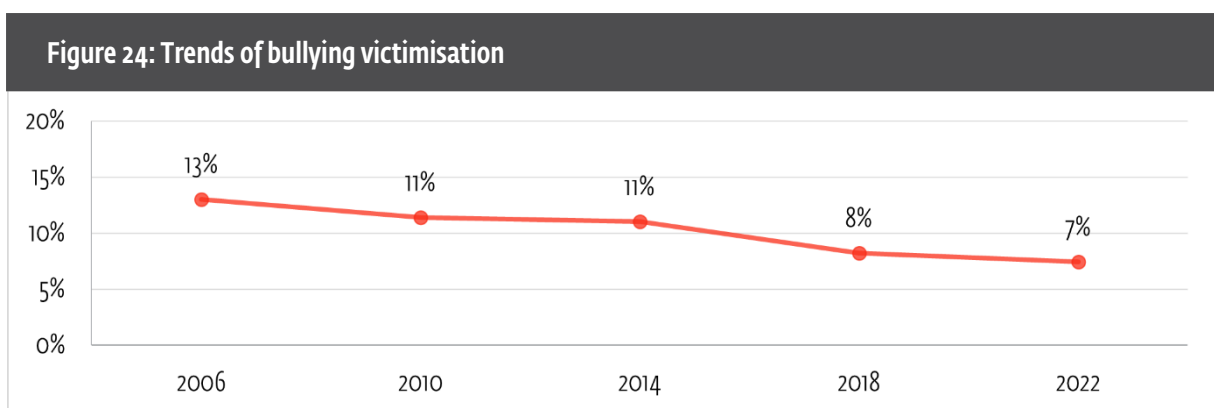
# Bullying in school: a closer look

## Introduction

Adolescents who are bullied more frequently experience negative psychosocial outcomes, such as higher levels of psychological symptoms and psychopathology, including depression, anxiety and suicidal ideation, both over the short term and through adulthood (Catone et al., 2015; Cosma et al., 2017; Halliday et al., 2021; Klomek et al., 2015).

In the HBSC study, within the questions related to bullying victimisation and perpetration, adolescents were specifically asked how often they have been bullied at school. A pupil is considered to be bullied in school when repeatedly exposed to negative actions of others over time (Olweus, 1996). Negative actions are understood as actions that intentionally inflicts harm or discomfort in others and in the case of bullying have to happen in a context of power imbalance. In other words, when the person who is being bullied is to a certain point helpless against the bully.

In Luxembourg, although the prevalence of bullying victimisation decreased significantly since 2006, between 2018 and 2022 it remained stable (13% in 2006 vs 8% in 2018 and 7% in 2022; Figure 24).



As seen previously in this report, the prevalence of bullying victimisation varies considerably in the different types of school. Although both bullying victimisation and type of school are associated with age, the latter is likely to only partially explain the variance in prevalence in the different types of school. For instance, in *voie de préparation* the prevalence of pupils reporting to have been bullied is the highest, with 13.6%, while in *classes inférieures* of the ESC they represent 5.7%.

The present section has a double goal. First, to better understand how the individual and contextual characteristics are associated with bullying. Second, to compare within bullying victims/non-victims, the mean levels of well-being.

## Method

### *Dependent variables*

Well-being. The WHO-5 Well-Being Index is a five-item measure of subjective well-being. Each item relies on a 0-to-5 rating scale. Here, we used a sum score ranging from 0 to 25.

Been bullied at school. The item asks how often they had been bullied in school during the past couple of months. Response categories ranged from 1 ("I have not") to 5 ("several times a week").

### *Independent variables*

Individual characteristics: age, family affluence, family structure, gender, and migration.

Contextual characteristics: type of school, school class and school.

### *Statistical analyses*

We conducted a two-step hierarchical binomial logistic regression analysis. In the first step (Step 1), we included individual factors (age, gender, family structure, family affluence, and migration status) as predictors to assess their impact on the dependent variable (been bullied). In the second step (Step 2), we added the type of school variable to the model to understand its specific effect on the dependent variable, controlling for the individual factors included in Step 1.

Additionally, we used a multilevel model to consider the variation on bullying victimisation. Intraclass Correlation (ICC) was used to understand how the hierarchical structure explains the variation of bullying victimisation. The first level (Level-1) referred to the ICC variation between/within the school class. The second level (Level-2) controlled for the following individual information: age, gender, family affluence, family structure and migration background. The third and fourth levels, in addition to the previous controlled variables, includes the variation between types of school (Level-3) and the schools itself (Level-4).

Following, a one-way analysis of variance (ANOVA) was performed to assess the differences between the mean values of well-being by the frequency that the adolescent has been bullied. Finally, independent t-tests were performed to compare the mean values of well-being by victims and non-victims of bullying by each type of school. The level of statistical significance for all the tests was .05.

## Results and discussion

The first goal of this section was to better understand how the individual and contextual characteristics are associated with bullying. Previously, we observed that bullying was associated with type of school, as well as other individual indicators, such as age, gender and family structure (for comprehensive details, see appendix Table 22). In what follows, those associations take into consideration the fact that types of school are not heterogeneous (for example,

pupils from *Enseignement Fondamental* are younger than the ones in other types of school), by including the previously mentioned individual and contextual characteristics in the model simultaneously.

In the first model most of sociodemographic variables were significantly associated to bullying, the exception being family affluence (Table 1). Once type of school is introduced in Step 2, however, age and migration lost their predictive power and were no longer significantly associated to bullying. This result suggests that the association between age and migration background on the one hand, and bullying on the other hand, might be due to the type of school.

**Table 1: Binomial logistical regression analysis predicting bullying**

	Step 1			Step 2		
	B	SE	p	B	SE	p
Age	0.226	0.045	.000	0.101	0.073	.165
Family affluence	0.035	0.76	.644	0.136	0.078	.081
Family structure	0.227	0.056	.000	0.184	0.056	.001
Gender	0.226	0.093	.015	0.278	0.094	.003
Migration	0.138	0.067	.040	0.076	0.068	.260
Type of school				-2.850	0.266	.000

Continuing to comprehend bullying victimisation in the pupils' social context, and in order to complement the previous findings, we intend to better understand how this behaviour varies within the school classes. In the HBSC study, pupils are sampled in their classes (named a cluster). The intraclass correlation coefficient (ICC) presented is an indicator of how much of the individual variance is due to being in such a cluster. In other words, how much of a certain behaviour can be explained by being in that specific class.

**Table 2: Intraclass correlation coefficient (ICC)**

	Level -1	Level -2	Level -3	Level-4
Bullying victimisation	6.3%	4.1%	3.1%	2.6%

*Note.* Level-1 referred to the variation within the school class without any control variable; Level -2 controls for age, gender, family affluence, family structure and migration background; Level -3 additionally controls for type of school; Level -4 additionally controls for school

In Table 2, it is possible to observe the shared variance of bullying. Being in a certain school class explained 6.3% of the bullying behaviour of an individual. In the literature a threshold of up to 5% is used to consider the cluster variance to be negligible.

As mentioned before, school classes, however, are not heterogenous. On the contrary, pupils in a certain class are likely to share some individual characteristics, age being the clearest example. For that reason, it is important to control for sociodemographic factors. Once age, gender, family affluence, family structure and migration background were taken into consideration in the model, only 4.1% of the individual behaviour was explained by being in a certain school class.

In addition, the classes are in a certain type of school and in a certain school, in which sometimes classes can be grouped together for teaching purposes. Therefore, the third level of this analysis also included the type of school and the fourth level included the school itself. Once those factors were additionally included in the model, only 2.6% of the individual behaviour was explained by being in a certain school class.

In sum, the variance of bullying could not be explained by being in a certain school class, but rather by the factors explored in the previous analyses (Table 1).

In the second part of this section, we aim to compare the mean levels of well-being by the frequency of bullying.

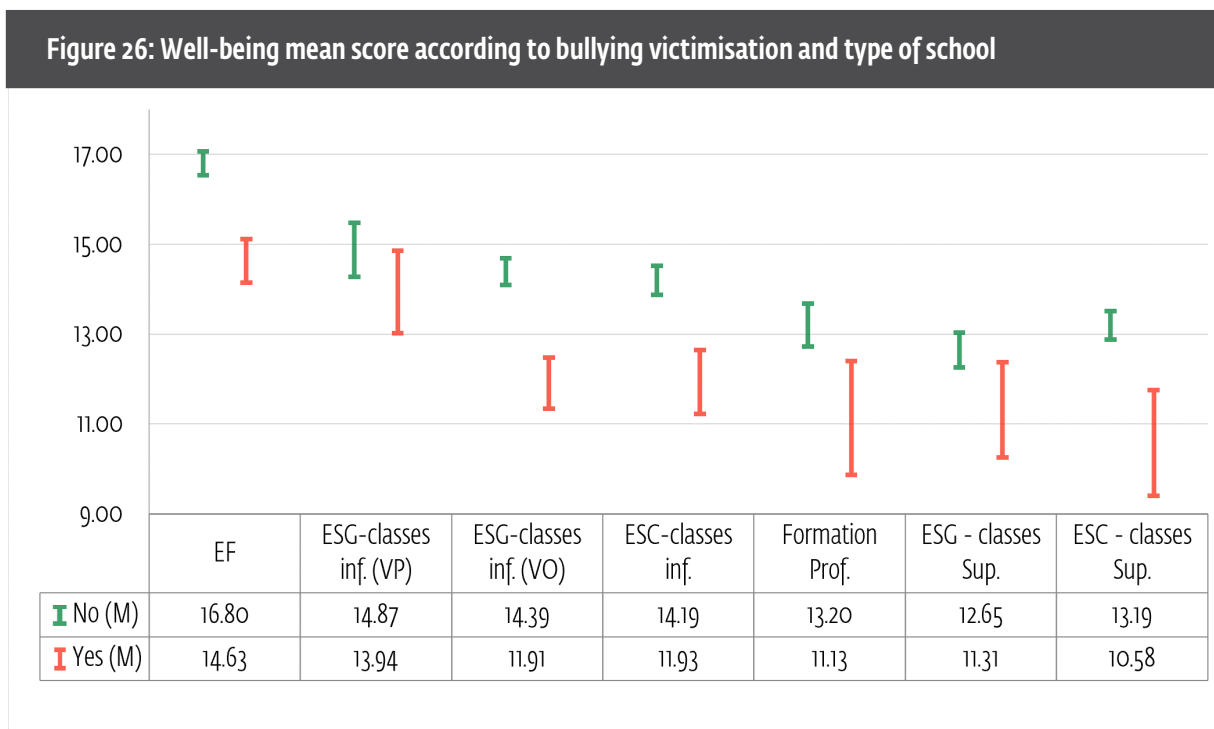
Adolescents who had not been bullied exhibited higher mean levels of well-being compared to those who had experienced bullying in past couple of months (95% CI [14.31-14.57]). In between the other groups, however, most of the differences were not significant (Figure 25, for comprehensive details, see the appendix Table 27). The only significant difference is between those who reported being bullied once or twice vs 2-3 times per month. These results are rather surprising, as one would imagine that the higher the frequency of bullying, the worse the well-being. However, they might be pointing to an adaptive response, such as an accommodation process (Inhelder & Piaget, 1958). In the process of development, individuals naturally go through different adaptive processes (namely assimilation and accommodation). Those are complementary processes, known to contribute to one's well-being. In the case of accommodation, the assessment of the personal situation is adapted to environmental conditions.



Although the previously stated bullying definition specifically refers to the repetition of this action, in Luxembourg a more negative mental health state seems to be present for those who reported being bullied once or twice, in comparison to pupils who were not bullied. Hence, in the following analyses, as the goal is to compare levels of well-

being in the different types of school, an adapted cut-off for our context will be used. As the results in the previous paragraph indicate that such a cut-off, based solely on well-being, should be “no bullying” vs “being bullied” (independently on how many times). For the following this will be categorisation used.

Figure 26 presents the comparison between victims and non-victims of bullying by each type of school (for comprehensive details, see the appendix, Table 28). For most of the types of school, significant differences were observed ( $p \geq .05$ ) between the bullying vs not bullied groups. The latter presented significantly better well-being than their peers who reported being bullied (e.g.: pupils in the *Enseignement fondamentale*;  $t[1754] = 8.21, p < .001$ ).



It is worth noting, however, that this is not the case for the ESG - *classes inférieures (voie de préparation)*. In the type of school with the highest prevalence of pupils who reported to have been bullied (13.6%), no significant difference is observed between victims and non-victims of bullying ( $t[482] = 1.63; p = .104$ ).

Similar findings were observed by Arnarsson and Bjarnason (2018). In this HBSC study comprising 35 countries, including Luxembourg, the authors pointed out that the prevalence of bullying in pupils' environment mediated the relationship between bullying and life satisfaction. In other words, the effects of bullying on life satisfaction were stronger in schools and countries where bullying was less frequent.

A possible explanation for this finding, might be the social comparison (Festinger, 1954). It is well known that individuals evaluate their own experiences in comparison to others. Once a pupil is being bullied in a context where many others experience the same situation, this problem is relativised. On the other hand, in the context of infrequent bullying, the detriment to one's well-being might be increased.

That doesn't mean however that increased bullying is a protective factor in one's well-being. Looking back into Figure 25, it is worth noting that only those who were not bullied ( $M = 14.44$ ; 95% CI [14.31-14.57]) maintained a normal/high well-being (a score  $>13$ ). In order to really protect adolescents' well-being, no bullying remains the only option.





## Conclusions and perspectives

A conjunction of biological and social features renders adolescence a key period in terms of norm-breaking and risk behaviours. Adolescence indeed involves major physiological changes affecting the body in general and the endocrine and neural systems in particular (Blakemore, 2012). Such processes result inter alia in heightened emotional reactivity and impulsivity (Casey et al., 2019; Chambers et al., 2003; Spear, 2010; Steinberg, 2005). Adolescence's attributes are also socially contingent, since they have varied in time and space (Schlegel & Barry, 1991). The social structure (e.g., compulsory education, urbanisation, social segregation, mass media) contributes to shaping adolescents' social roles, trajectories, and peer networks (Schlegel & Barry, 1991; Worthman & Trang, 2018).

This report aimed to provide the community with an update of the prevalence of risk behaviours in adolescents in Luxembourg in the year 2022. Overall, most findings involved no substantial evolution compared to 2018 (Heinz et al., 2021). The previous HBSC surveys conducted in Luxembourg were indicative of a decrease in the prevalence of alcohol (ab)use, cigarette consumption, and of bullying victimisation and perpetration over the period 2006-2018. The prevalence of involvement in physical fight and of cannabis use were relatively stable during this period (Heinz et al., 2020).

In sum, in 2022 alcohol and cigarette use as well as drunkenness experience slightly decreased since 2018. This trend was slightly stronger in boys than in girls. Cannabis use slightly increased in adolescents, though. Such an increase was stronger in girls, who also appeared as more at risk for e-cigarette use than boys. While levels of bullying victimisation and perpetration were similar to those observed in 2018 (Heinz et al., 2021), with the exception of cyberbullying victimisation, the prevalence of involvement in physical fight decreased since 2018, although that reflects a decrease in boys prevalence, as it remained stable in girls. Recent trends in sexual intercourse highlighted a decrease in boys' prevalence and a slight increase in girls' who already had sexual intercourse (Health Behaviour in School-aged Children Luxembourg Study, 2023). Notably, the main evolution since 2018 regards the prevalence of problematic social media users, which almost doubled between 2018 and 2022.

All in all, risk behaviours appeared almost systematically associated to age, type of school, and family structure. Substance use was positively associated with age: the older an adolescent, the higher the likelihood of drinking, smoking tobacco, vaping, and using cannabis. Bullying victimisation at school and physical fighting were negatively associated with age. The prevalence of cyberbullying victimisation and perpetration and of problematic use of social media was higher in 13-14-year-old participants than in the other age groups. While sexual intercourse and contraceptive pill use were positively linked to age, condom use was negatively associated with age. Findings also highlighted the protective role played by nuclear family. Living with both parents was associated with a relatively low prevalence in an extremely large majority of cases. The link between risk behaviours and type of school was, in most cases, reflective of this age effect. However, the analysis revealed that, at the secondary-education level, the prevalence of risk behaviours was generally the lowest in ESC. A few exceptions are noticeable, though (e.g., lifetime prevalence of alcohol use). Inversely, attending *voie de préparation* and *formation professionnelle* was linked to higher prevalence of regular substance use. Cannabis acceptability was higher in *voie de préparation* pupils, who, in addition, were also more prone to be (cyber)bullies and to be cyberbullied than their counterparts. It should be noted that the link between risk behaviours and the type of school attended might be due to different levels of social diversity within the types in question. Notably, the prevalence of boys, adolescents of relatively low affluence, first- or second-generation migrants, and of participants who do not live with both parents is substantially higher in *voie de préparation*

and *formation professionnelle* than in the other types of school. This partly explains why these attendees, who exhibited more sociodemographic risk factors, reported more risk behaviours than their counterparts. Moreover, the fact that a large rate of *voie de préparation* attendees pursue their education in *formation professionnelle* may contribute to the consolidation of certain risk behaviours.

Looking specifically into bullying victimisation at school, the abovementioned heterogeneity of the types of school is taken into consideration in further analyses. Type of school is significantly associated to bullying when controlling for age, family affluence, family structure, gender and migration. Moreover, once type of school is integrated into the analyses only gender and family structure remain associated to bullying. In addition, the variance of bullying due to being in a certain school class was analysed. Once the aforementioned factors were integrated into the model, the prevalence of the bullying behaviour explained by being in a certain class was considered negligible. Following, the relationship between bullying victimisation and well-being was explored. Adolescents in Luxembourg who had not been bullied exhibited higher levels of well-being compared to those who had experienced in all types of school, except for the ESG - *classes inférieures (voie de préparation)*. In the latter, no significant difference in the levels of well-being between victims and non-victims of bullying was found. It is worth noting that in that type of school the highest prevalence of bullying was found, suggesting that in a context where others experience the same situation, the influence this problem has on their well-being is reduced.

The school setting is a privileged place for health promotion (Langford et al., 2015). Healthier adolescents have better results in schools, that seems to be associated with better health outcomes later in life. Interventions in the school setting also offers the possibility of a social contagion effect, in other words, these behaviours could spread to others (Ali et al., 2011). Previous HBSC report (Heinz et al., 2021) also suggest that adolescents who engage in a certain risk behaviour are more likely to engage in others. The co-occurrence of risk behaviours has important implications for the design of intervention programs, as interventions targeting multiple risk behaviours are more promising to reduce them (Rocca et al., 2019; World Health Organization, 2016).

The WHO Health Promoting Schools Initiative highlights the importance of the reciprocal relationship between health and education (World Health Organization & United Nations Educational, Scientific and Cultural Organization, 2021). Schools are vital settings to promote health and well-being of pupils, their parents and caregivers, the school staff, and the broader community. Yet, its implementation requires a global approach of actions at several mutually reinforcing levels in schools (physical and social-emotional environments, policies, curriculum), integrating the different school partners, such as the family, community stakeholders and health promotion organisations.

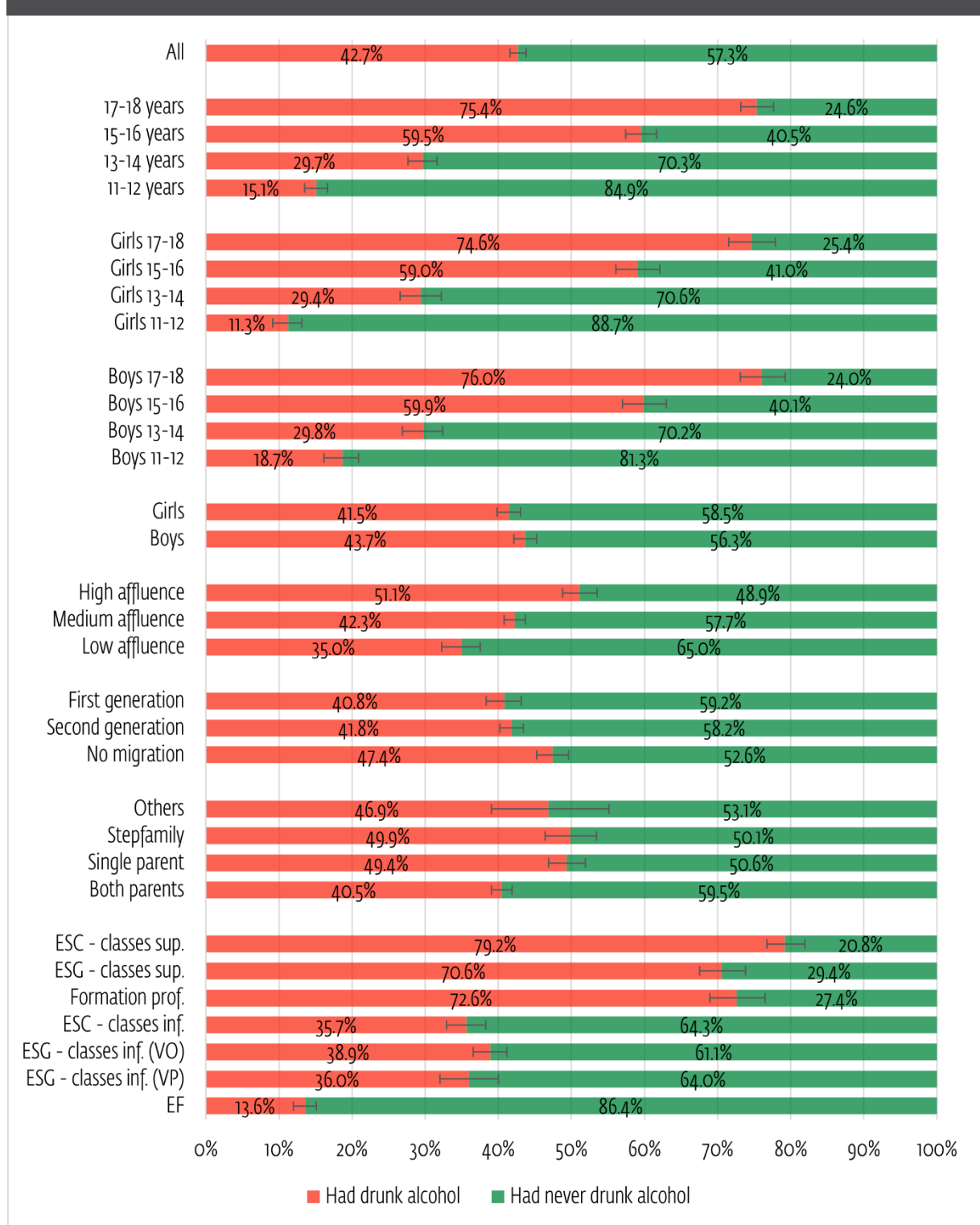
Including the family and stimulating parental communication is also an important line of preventive intervention. It is appropriate to emphasise adolescents' perceptions and expectations regarding the negative and positive consequences of these behaviours, and to promote alternative healthy activities (Vashishtha et al., 2020). It is important to notice that such interventions should be compatible with the agenda of working parents, affordable for every family, ensure supervision of other children during the intervention, and provide support with transportation issues (Newton et al., 2017).

# Appendix



Alcohol use

Figure 27: Lifetime prevalence of alcohol use according to sociodemographic groups

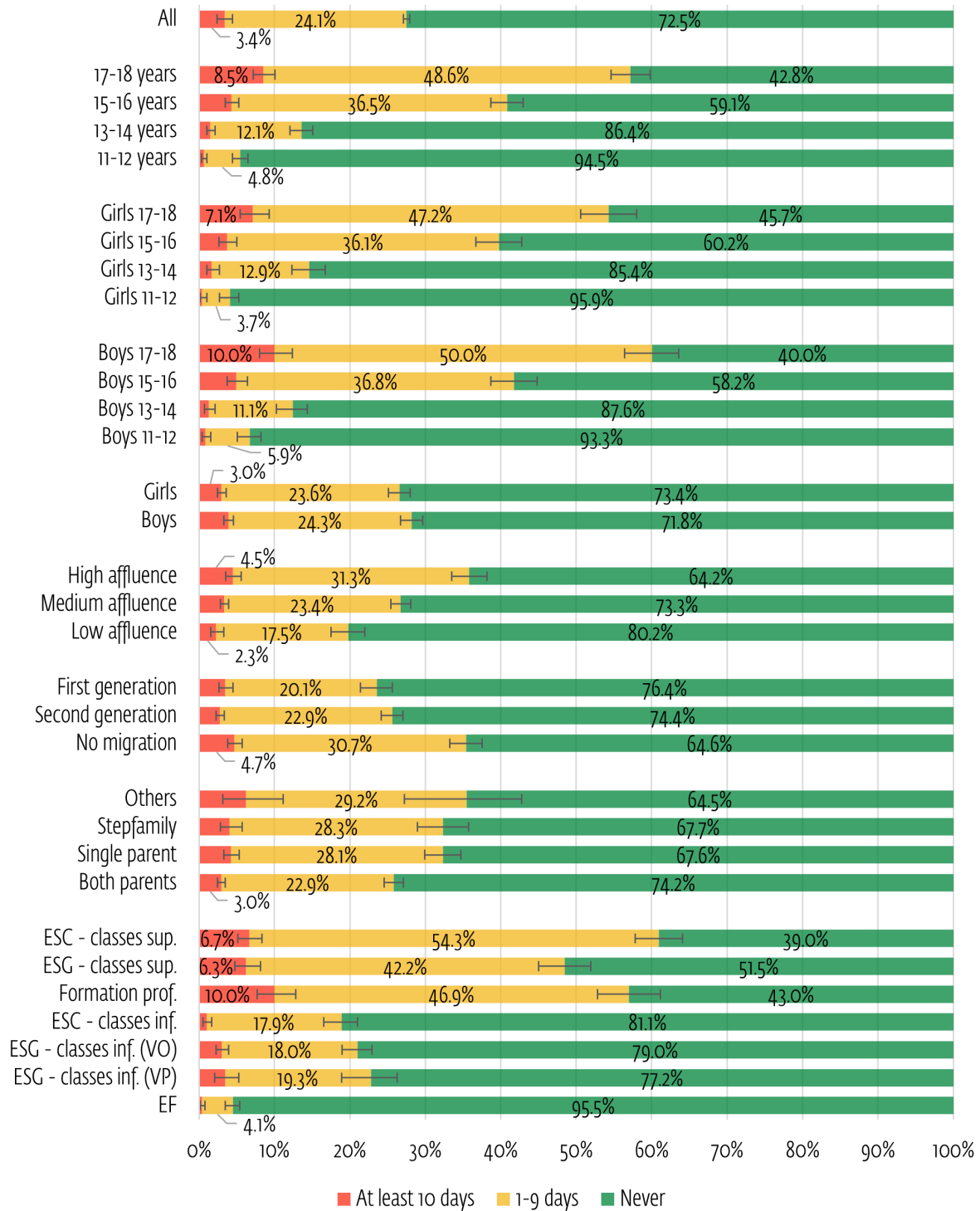


**Table 3: Lifetime prevalence of alcohol use according to sociodemographic groups**

	Had drunk alcohol (2-7)	Have never drunk alcohol (1)	Chi square test
<b>All</b>			<b>N = 7 586</b>
	42.7 (41.6-43.8)	57.3 (56.2-58.4)	
<b>Age</b>			<b>N = 7 586</b>
11-12 years	15.1 (13.6-16.7)	84.9 (83.3-86.4)	
13-14 years	29.7 (27.8-31.7)	70.3 (68.3-72.2)	$p < .001$
15-16 years	59.5 (57.4-61.6)	40.5 (38.4-42.6)	$\gamma = .649$
17-18 years	75.4 (73.1-77.5)	24.6 (22.5-26.9)	
<b>Age x Gender</b>			<b>N = 3 695</b>
Girls 11-12	11.3 (9.4-13.4)	88.7 (86.6-90.6)	
Girls 13-14	29.4 (26.6-32.2)	70.6 (67.8-73.4)	$p < .001$
Girls 15-16	59.0 (56.0-62.0)	41.0 (38.0-44.0)	$\gamma = .680$
Girls 17-18	74.6 (71.3-77.7)	25.4 (22.3-28.7)	
			<b>N = 3 842</b>
Boys 11-12	18.7 (16.4-21.1)	81.3 (78.8-83.6)	
Boys 13-14	29.8 (27.1-32.6)	70.2 (67.4-72.9)	$p < .001$
Boys 15-16	59.9 (56.9-62.9)	40.1 (37.1-43.1)	$\gamma = .621$
Boys 17-18	76.0 (72.9-79.1)	24.0 (21.1-27.2)	
<b>Gender</b>			<b>N = 7 537</b>
Girls	41.5 (39.9-43.1)	58.5 (56.9-60.1)	$p = .051$
Boys	43.7 (42.1-45.3)	56.3 (54.8-57.9)	Cramér's V. = .022
<b>Family affluence</b>			<b>N = 7 373</b>
High	51.1 (48.7-53.5)	48.9 (46.5-51.3)	$p < .001$
Medium	42.3 (40.8-43.7)	57.7 (56.3-59.2)	$\gamma = .189$
Low	35.0 (32.4-37.6)	65.0 (62.4-67.6)	
<b>Migration background</b>			<b>N = 7 307</b>
First generation	40.8 (38.4-43.2)	59.2 (56.7-61.5)	$p < .001$
Second generation	41.8 (40.2-43.4)	58.2 (56.5-59.7)	Cramér's V. = .054
No migration	47.4 (45.3-49.6)	52.6 (50.4-54.7)	
<b>Family structure</b>			<b>N = 7 155</b>
Others	46.9 (38.6-54.7)	53.1 (45.3-61.4)	
Stepfamily	49.9 (46.4-53.4)	50.1 (46.7-53.7)	$p < .001$
Single parent	49.4 (46.9-51.9)	50.6 (48.1-53.2)	Cramér's V. = .086
Both parents	40.5 (39.1-41.9)	59.5 (58.1-60.9)	
<b>Type of school</b>			<b>N = 7 586</b>
ESC-classes sup.	79.2 (76.5-81.7)	20.8 (18.3-23.5)	
ESG-classes sup.	70.6 (67.3-73.6)	29.4 (26.4-32.7)	
Formation prof.	72.6 (68.7-76.3)	27.4 (23.7-31.3)	
ESC-classes inf.	35.7 (33.0-38.4)	64.3 (61.6-67.0)	$p < .001$
ESG-classes inf. (VO)	38.9 (36.6-41.3)	61.1 (58.7-63.4)	Cramér's V. = .466
ESG-classes inf. (VP)	36.0 (32.1-40.1)	64.0 (60.1-68.0)	
EF	13.6 (12.1-15.2)	86.4 (84.8-88.0)	

Respondents were asked how many days they have drunk alcohol in their lifetime. The answer options ranged from "never" (1) to "30 days or more" (7). Alcohol use in the lifetime was categorised in: had drunk alcohol (categories 2-to-7) and had never drunk alcohol (category 1). The results are in % (95% Confidence Interval).

Figure 28: Prevalence of alcohol use over the last month according to sociodemographic groups



**Table 4: Prevalence of alcohol use over the last month according to sociodemographic groups**

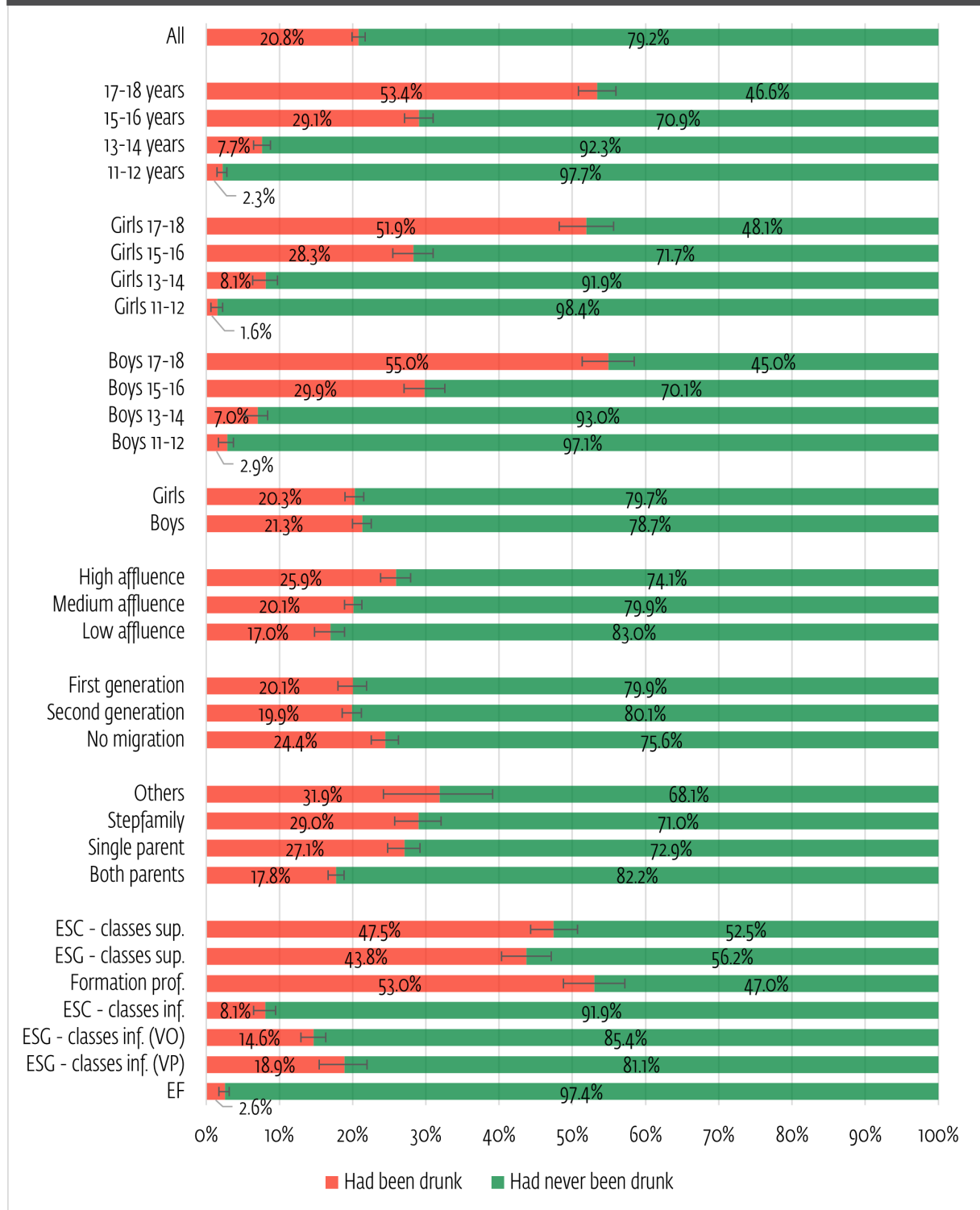
	At least 10 days (5-7)	1-9 days (2-4)	Never (1)	Chi square test
<b>All</b>				<b>N = 7 287</b>
	3.4 (3.0-3.9)	24.1 (23.1-25.1)	72.5 (71.5-73.5)	
<b>Age</b>				<b>N = 7 287</b>
11-12 years	0.7 (0.3-1.1)	4.8 (3.9-5.9)	94.5 (93.4-95.5)	
13-14 years	1.5 (1.0-2.1)	12.1 (10.7-13.6)	86.4 (84.9-87.9)	$p < .001$
15-16 years	4.3 (3.5-5.3)	36.5 (34.4-38.7)	59.1 (57.0-61.3)	$\gamma = .665$
17-18 years	8.5 (7.2-10.1)	48.6 (46.0-51.2)	42.8 (40.3-45.5)	
<b>Age x Gender</b>				<b>N = 3 579</b>
Girls 11-12	0.4 (0.1-1.0)	3.7 (2.6-5.0)	95.9 (94.5-97.0)	
Girls 13-14	1.7 (1.1-2.7)	12.9 (10.9-15.2)	85.4 (83.1-87.5)	$p < .001$
Girls 15-16	3.7 (2.7-5.0)	36.1 (33.1-39.1)	60.2 (57.1-63.2)	$\gamma = .661$
Girls 17-18	7.1 (5.4-9.3)	47.2 (43.6-51.0)	45.7 (42.0-49.4)	
<b>Boys</b>				<b>N = 3 658</b>
Boys 11-12	0.9 (0.4-1.6)	5.9 (4.5-7.5)	93.3 (91.6-94.8)	
Boys 13-14	1.3 (0.7-2.2)	11.1 (9.2-13.1)	87.6 (85.4-89.5)	$p < .001$
Boys 15-16	5.0 (3.7-6.4)	36.8 (33.9-39.9)	58.2 (55.1-61.2)	$\gamma = .672$
Boys 17-18	10.0 (8.0-12.4)	50.0 (46.3-53.6)	40.0 (36.4-43.5)	
<b>Gender</b>				<b>N = 7 237</b>
Girls	3.0 (2.5-3.6)	23.6 (22.2-25.0)	73.4 (71.9-74.8)	$p = .067$
Boys	3.9 (3.3-4.6)	24.3 (22.9-25.7)	71.8 (70.3-73.3)	Cramér's V. = .027
<b>Family affluence</b>				<b>N = 7 093</b>
High	4.5 (3.6-5.6)	31.3 (29.1-33.6)	64.2 (61.8-66.5)	
Medium	3.3 (2.8-3.9)	23.4 (22.1-24.7)	73.3 (71.9-74.6)	$p < .001$
Low	2.3 (1.6-3.3)	17.5 (15.4-19.7)	80.2 (77.9-82.4)	$\gamma = .221$
<b>Migration background</b>				<b>N = 7 031</b>
First generation	3.5 (2.7-4.5)	20.1 (18.1-22.1)	76.4 (74.3-78.5)	
Second generation	2.8 (2.2-3.3)	22.9 (21.5-24.3)	74.4 (72.9-75.8)	$p < .001$
No migration	4.7 (3.8-5.7)	30.7 (28.7-32.8)	64.6 (62.4-66.7)	Cramér's V. = .077
<b>Family structure</b>				<b>N = 6 876</b>
Others	6.3 (3.2-11.2)	29.2 (22.4-37.2)	64.5 (56.3-71.8)	
Stepfamily	4.1 (2.8-5.7)	28.3 (25.1-31.6)	67.7 (64.3-71.1)	$p < .001$
Single parent	4.2 (3.3-5.4)	28.1 (25.9-30.5)	67.6 (65.2-70.0)	Cramér's V. = .052
Both parents	3.0 (2.5-3.5)	22.9 (21.7-24.1)	74.2 (72.9-75.4)	
<b>Type of school</b>				<b>N = 7 287</b>
ESC-classes sup.	6.7 (5.1-8.4)	54.3 (51.1-57.5)	39.0 (35.9-42.2)	
ESG-classes sup.	6.3 (4.8-8.2)	42.2 (38.8-45.6)	51.5 (48.0-55.0)	
Formation prof.	10.0 (7.7-12.8)	46.9 (42.7-51.2)	43.0 (38.9-47.2)	
ESC-classes inf.	1.0 (0.6-1.7)	17.9 (15.7-20.1)	81.1 (78.7-83.2)	$p < .001$
ESG-classes inf. (VO)	3.0 (2.3-3.9)	18.0 (16.2-19.9)	79.0 (76.9-80.9)	Cramér's V. = .321
ESG-classes inf. (VP)	3.5 (2.1-5.3)	19.3 (16.1-23.0)	77.2 (73.4-80.7)	
EF	0.4 (0.2-0.8)	4.1 (3.3-5.1)	95.5 (94.4-96.4)	

Respondents were asked how many days they have drunk alcohol in the last 30 days. The answer options ranged from "never" (1) to "30 days or more" (7). Alcohol use in the last month was categorised in: at least 10 days (categories 5-to-7), 1-9 days (categories 2-to-4) and never (category 1). The results are in % (95% Confidence Interval).



Drunkenness

Figure 29: Lifetime prevalence of drunkenness according to sociodemographic groups

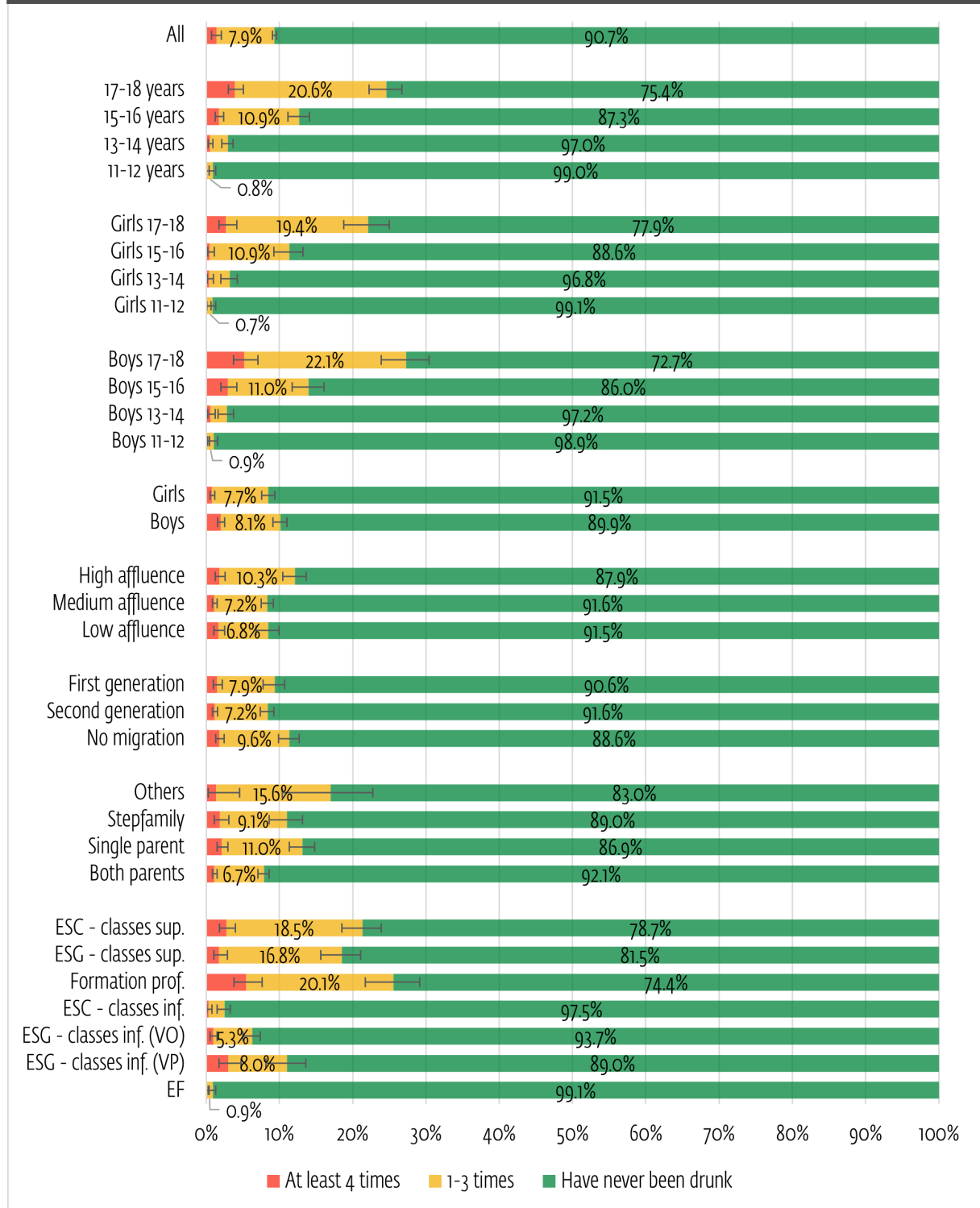


**Table 5: Lifetime prevalence of drunkenness according to sociodemographic groups**

	Had been drunk (2-5)	Have never been drunk (1)	Chi square test
<b>All</b>			<b>N = 7 623</b>
	20.8 (19.9-21.8)	79.2 (78.2-80.1)	
<b>Age</b>			<b>N = 7 623</b>
11-12 years	2.3 (1.7-3.0)	97.7 (97.0-98.3)	
13-14 years	7.7 (6.6-8.9)	92.3 (91.2-93.5)	$p < .001$
15-16 years	29.1 (27.2-31.1)	70.9 (69.0-72.9)	$\gamma = .758$
17-18 years	53.4 (50.9-56.0)	46.6 (44.0-49.1)	
<b>Age x Gender</b>			<b>N = 3 709</b>
Girls 11-12	1.6 (0.9-2.5)	98.4 (97.5-99.1)	
Girls 13-14	8.1 (6.5-9.9)	91.9 (90.1-93.5)	$p < .001$
Girls 15-16	28.3 (25.6-31.1)	71.7 (69.0-74.5)	$\gamma = .758$
Girls 17-18	51.9 (48.2-55.6)	48.1 (44.4-51.8)	
			<b>N = 3 864</b>
Boys 11-12	2.9 (2.0-4.0)	97.1 (95.9-98.0)	
Boys 13-14	7.0 (5.6-8.7)	93.0 (91.2-94.3)	$p < .001$
Boys 15-16	29.9 (27.1-32.7)	70.1 (67.3-72.9)	$\gamma = .761$
Boys 17-18	55.0 (51.3-58.4)	45.0 (41.4-48.6)	
<b>Gender</b>			<b>N = 7 572</b>
Girls	20.3 (19.0-21.6)	79.7 (78.4-81.0)	$p = .277$
Boys	21.3 (20.0-22.6)	78.7 (77.4-80.0)	Cramér's V. = .012
<b>Family affluence</b>			<b>N = 7 415</b>
High	25.9 (23.9-28.0)	74.1 (72.0-76.1)	$p < .001$
Medium	20.1 (18.9-21.3)	79.9 (78.7-81.1)	$\gamma = .158$
Low	17.0 (15.0-19.1)	83.0 (80.9-85)	
<b>Migration background</b>			<b>N = 7 427</b>
First generation	20.1 (18.1-22.0)	79.9 (77.9-81.8)	$p < .001$
Second generation	19.9 (18.7-21.2)	80.1 (78.7-81.3)	Cramér's V. = .052
No migration	24.4 (22.6-26.3)	75.6 (73.7-77.4)	
<b>Family structure</b>			<b>N = 7 192</b>
Others	31.9 (24.7-39.6)	68.1 (60.4-75.3)	
Stepfamily	29.0 (25.9-32.2)	71.0 (67.8-74.1)	$p < .001$
Single parent	27.1 (24.9-29.3)	72.9 (70.7-75.1)	Cramér's V. = .120
Both parents	17.8 (16.7-18.9)	82.2 (81.1-83.3)	
<b>Type of school</b>			<b>N = 7 623</b>
ESC-classes sup.	47.5 (44.3-50.6)	52.5 (49.4-55.7)	
ESG-classes sup.	43.8 (40.4-47.2)	56.2 (52.8-59.6)	
Formation prof.	53.0 (48.8-57.2)	47.0 (42.8-51.2)	
ESC-classes inf.	8.1 (6.6-9.7)	91.9 (90.3-93.4)	$p < .001$
ESG-classes inf. (VO)	14.6 (13.0-16.4)	85.4 (83.6-87)	Cramér's V. = .449
ESG-classes inf. (VP)	18.9 (15.8-22.3)	81.1 (77.7-84.2)	
EF	2.6 (1.9-3.3)	97.4 (96.6-98.1)	

Respondents were asked to which extent they had so much alcohol that they were really drunk in their lifetime. The answer options ranged from "no, never" (1) to "yes, more than 10 times" (5). Drunkenness in the lifetime was categorised in: had been drunk (categories 2-to-5) and had never been drunk (category 1). The results are in % (95% Confidence Interval).

Figure 30: Prevalence of drunkenness over the last month according to sociodemographic groups



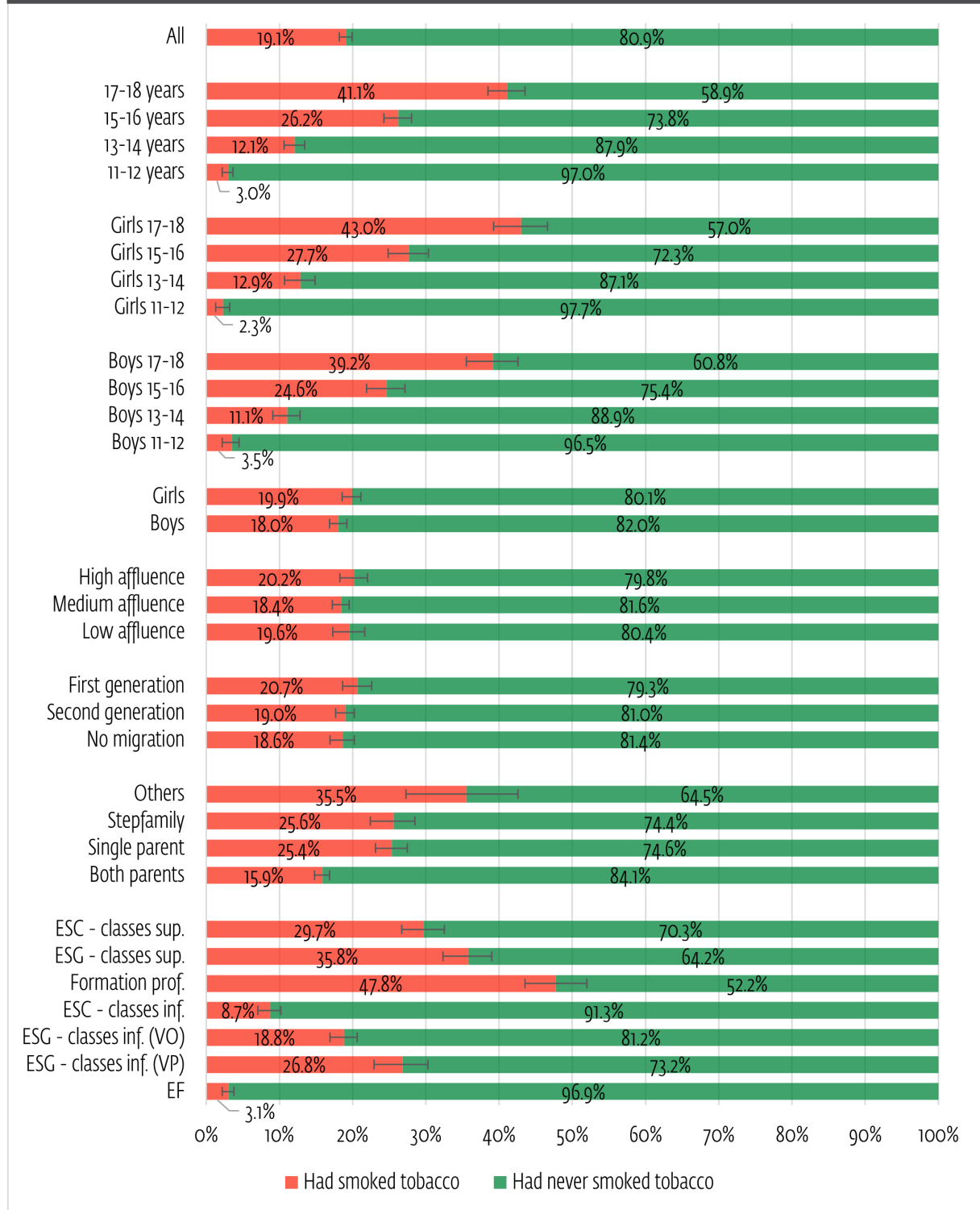
**Table 6: Prevalence of drunkenness over the last month according to sociodemographic groups**

	At least 4 times (4-5)	1-3 times (2-3)	Have never been drunk (1)	Chi square test
<b>All</b>				<b>N = 7 220</b>
	1.4 (1.2-1.7)	7.9 (7.3-8.5)	90.7 (90.0-91.3)	
<b>Age</b>				<b>N = 7 220</b>
11-12 years	0.1 (0.0-0.4)	0.8 (0.5-1.3)	99.0 (98.5-99.4)	
13-14 years	0.5 (0.3-0.9)	2.5 (1.9-3.3)	97.0 (96.2-97.7)	$p < .001$
15-16 years	1.8 (1.3-2.4)	10.9 (9.6-12.4)	87.3 (85.8-88.7)	$\gamma = .697$
17-18 years	4.0 (3.1-5.1)	20.6 (18.6-22.8)	75.4 (73.1-77.6)	
<b>Age x Gender</b>				<b>N = 3 542</b>
Girls 11-12	0.2 (0.0-0.7)	0.7 (0.3-1.3)	99.1 (98.4-99.6)	
Girls 13-14	0.4 (0.1-1.0)	2.8 (1.9-4.0)	96.8 (95.6-97.8)	$p < .001$
Girls 15-16	0.5 (0.2-1.1)	10.9 (9.0-12.9)	88.6 (86.6-90.5)	$\gamma = .680$
Girls 17-18	2.7 (1.7-4.2)	19.4 (16.6-22.5)	77.9 (74.6-80.8)	
<b>Gender</b>				<b>N = 3 630</b>
Boys 11-12	0.1 (0.0-0.5)	0.9 (0.5-1.7)	98.9 (98.1-99.5)	
Boys 13-14	0.6 (0.3-1.2)	2.2 (1.4-3.3)	97.2 (96.0-98.1)	$p < .001$
Boys 15-16	2.9 (2.0-4.2)	11.0 (9.2-13.1)	86.0 (83.8-88.2)	$\gamma = .713$
Boys 17-18	5.2 (3.8-7.1)	22.1 (19.1-25.2)	72.7 (69.4-75.9)	
<b>Gender</b>				<b>N = 7 172</b>
Girls	0.8 (0.6-1.2)	7.7 (6.8-8.6)	91.5 (90.5-92.4)	$p < .001$
Boys	2.0 (1.6-2.5)	8.1 (7.3-9.0)	89.9 (88.8-90.8)	Cramér's V. = .051
<b>Family affluence</b>				<b>N = 7 024</b>
High	1.8 (1.2-2.6)	10.3 (8.9-11.9)	87.9 (86.2-89.4)	
Medium	1.1 (0.8-1.5)	7.2 (6.5-8.0)	91.6 (90.8-92.4)	$p < .001$
Low	1.7 (1.1-2.5)	6.8 (5.4-8.3)	91.5 (89.9-93.0)	$\gamma = .131$
<b>Migration background</b>				<b>N = 6 973</b>
First generation	1.5 (1.0-2.2)	7.9 (6.6-9.3)	90.6 (89.1-92.0)	
Second generation	1.2 (0.9-1.6)	7.2 (6.4-8.1)	91.6 (90.6-92.5)	$p = .009$
No migration	1.8 (1.3-2.5)	9.6 (8.3-10.9)	88.6 (87.1-90.0)	Cramér's V. = .031
<b>Family structure</b>				<b>N = 6 811</b>
Others	1.4 (0.3-4.6)	15.6 (10.6-22.7)	83.0 (76.5-88.8)	
Stepfamily	1.9 (1.1-3.1)	9.1 (7.2-11.4)	89.0 (86.5-91.1)	$p < .001$
Single parent	2.1 (1.5-3.0)	11.0 (9.5-12.7)	86.9 (85.1-88.6)	Cramér's V. = .060
Both parents	1.1 (0.9-1.5)	6.7 (6.0-7.5)	92.1 (91.3-92.9)	
<b>Type of school</b>				<b>N = 7 220</b>
ESC-classes sup.	2.8 (1.8-4.0)	18.5 (16.2-21.2)	78.7 (75.9-81.2)	
ESG-classes sup.	1.7 (1.0-2.9)	16.8 (14.3-19.5)	81.5 (78.6-84.1)	
Formation prof.	5.4 (3.8-7.7)	20.1 (16.8-23.6)	74.4 (70.6-78.1)	
ESC-classes inf.	0.3 (0.1-0.8)	2.1 (1.4-3.1)	97.5 (96.5-98.3)	$p < .001$
ESG-classes inf. (VO)	1.0 (0.6-1.5)	5.3 (4.3-6.5)	93.7 (92.4-94.8)	Cramér's V. = .213
ESG-classes inf. (VP)	3.1 (1.8-4.8)	8.0 (5.9-10.6)	89.0 (86.1-91.5)	
EF	0.1 (0.0-0.3)	0.9 (0.5-1.4)	99.1 (98.6-99.5)	

Respondents were asked to which extent they had so much alcohol that they were really drunk in the last 30 days. The answer options ranged from "no, never" (1) to "yes, more than 10 times" (5). Drunkenness in the last month was categorised in: at least 4 times (categories 4-to-5), 1-3 times (categories 2-to-3) and never (category 1). The results are in % (95% Confidence Interval).

Cigarette use

Figure 31: Lifetime prevalence of tobacco smokers according to sociodemographic groups

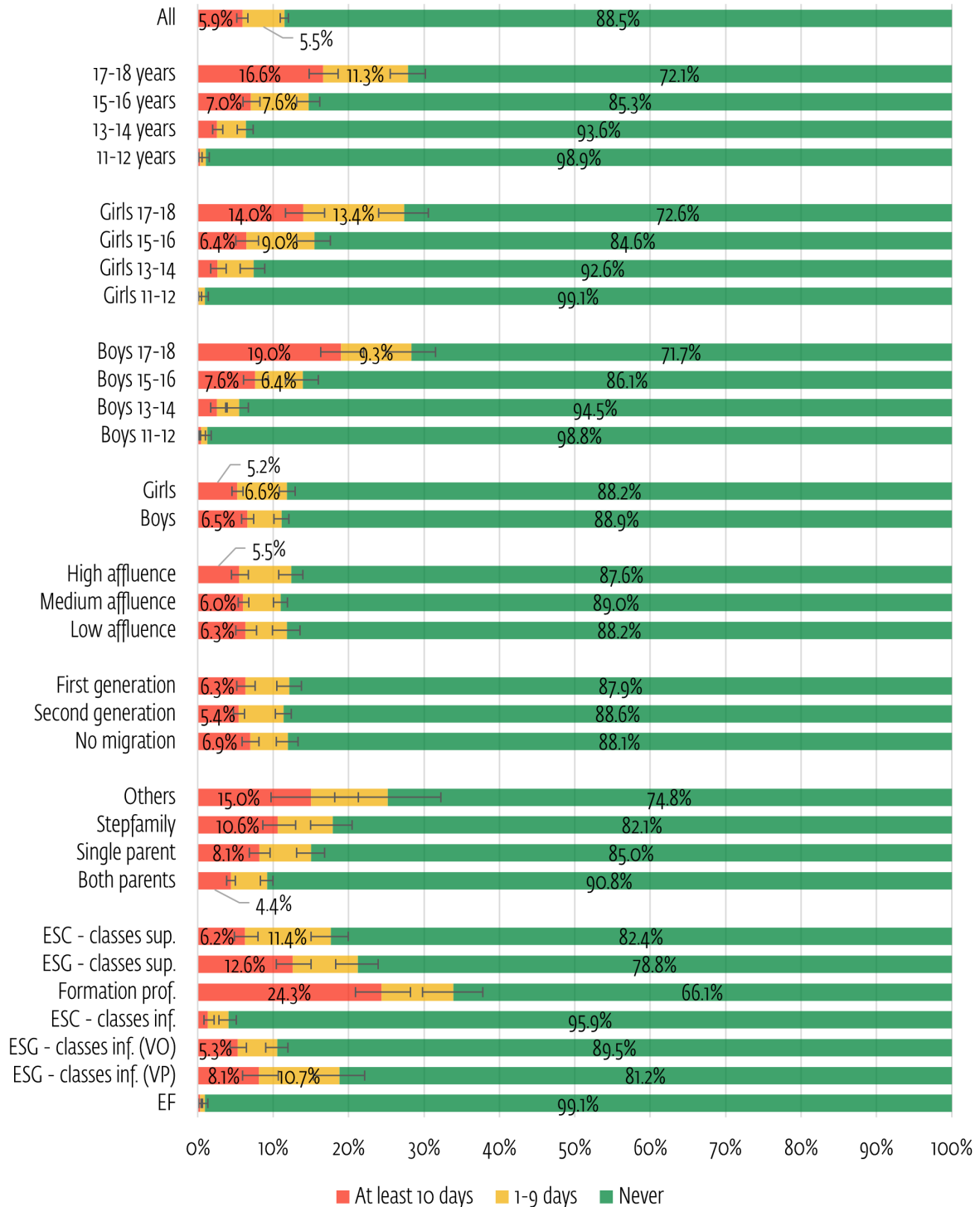


**Table 7: Lifetime prevalence of tobacco smokers according to sociodemographic groups**

	Had smoked tobacco (2-7)	Have never smoked tobacco (1)	Chi square test
<b>All</b>			<b>N = 7 628</b>
	19.1 (18.2-20.0)	80.9 (80.0-81.8)	
<b>Age</b>			<b>N = 7 628</b>
11-12 years	3.0 (2.3-3.8)	97.0 (96.2-97.7)	
13-14 years	12.1 (10.8-13.6)	87.9 (86.4-89.2)	$p < .001$
15-16 years	26.2 (24.4-28.2)	73.8 (71.8-75.6)	$\gamma = .624$
17-18 years	41.1 (38.5-43.6)	58.9 (56.3-61.4)	
<b>Age x Gender</b>			<b>N = 3 708</b>
Girls 11-12	2.3 (1.6-3.5)	97.7 (96.6-98.5)	
Girls 13-14	12.9 (10.9-15.0)	87.1 (85.0-89.1)	$p < .001$
Girls 15-16	27.7 (25.0-30.4)	72.3 (69.6-75.0)	$\gamma = .643$
Girls 17-18	43.0 (39.4-46.7)	57.0 (53.3-60.6)	
			<b>N = 3 869</b>
Boys 11-12	3.5 (2.5-4.8)	96.5 (95.1-97.4)	
Boys 13-14	11.1 (9.3-13.1)	88.9 (86.9-90.7)	$p < .001$
Boys 15-16	24.6 (22.1-27.3)	75.4 (72.7-77.9)	$\gamma = .610$
Boys 17-18	39.2 (35.6-42.7)	60.8 (57.2-64.2)	
<b>Gender</b>			<b>N = 7 577</b>
Girls	19.9 (18.7-21.2)	80.1 (78.8-81.3)	$p = .038$
Boys	18.0 (16.9-19.3)	82.0 (80.7-83.1)	Cramér's V. = .024
<b>Family affluence</b>			<b>N = 7 416</b>
High	20.2 (18.4-22.2)	79.8 (77.8-81.6)	$p = .517$
Medium	18.4 (17.3-19.6)	81.6 (80.4-82.7)	$\gamma = .017$
Low	19.6 (17.5-21.8)	80.4 (78.2-82.5)	
<b>Migration background</b>			<b>N = 7 338</b>
First generation	20.7 (18.8-22.7)	79.3 (77.3-81.2)	$p = .241$
Second generation	19.0 (17.8-20.3)	81.0 (79.7-82.2)	Cramér's V. = .020
No migration	18.6 (17.0-20.4)	81.4 (79.6-83.0)	
<b>Family structure</b>			<b>N = 7 187</b>
Others	35.5 (27.8-43.1)	64.5 (56.3-71.6)	
Stepfamily	25.6 (22.6-28.7)	74.4 (71.2-77.3)	$p < .001$
Single parent	25.4 (23.2-27.6)	74.6 (72.4-76.8)	Cramér's V. = .128
Both parents	15.9 (14.8-16.9)	84.1 (83.1-85.2)	
<b>Type of school</b>			<b>N = 7 628</b>
ESC-classes sup.	29.7 (26.9-32.7)	70.3 (67.3-73.1)	
ESG-classes sup.	35.8 (32.5-39.1)	64.2 (60.8-67.4)	
Formation prof.	47.8 (43.5-52.0)	52.2 (48.0-56.5)	
ESC-classes inf.	8.7 (7.2-10.4)	91.3 (89.6-92.8)	$p < .001$
ESG-classes inf. (VO)	18.8 (17.0-20.7)	81.2 (79.3-83.0)	Cramér's V. = .346
ESG-classes inf. (VP)	26.8 (23.3-30.7)	73.2 (69.3-76.7)	
EF	3.1 (2.4-3.9)	96.9 (96.1-97.6)	

Respondents were asked how many days they have smoke cigarettes in their lifetime. The answer options ranged from "never" (1) to "30 days or more" (7). Cigarette use in the lifetime was categorised in: had smoked tobacco (categories 2-to-7) and had never smoked tobacco (category 1). The results are in % (95% Confidence Interval).

Figure 32: Prevalence of tobacco smokers over the last month according to sociodemographic groups



**Table 8: Prevalence of tobacco smokers over the last month according to sociodemographic groups**

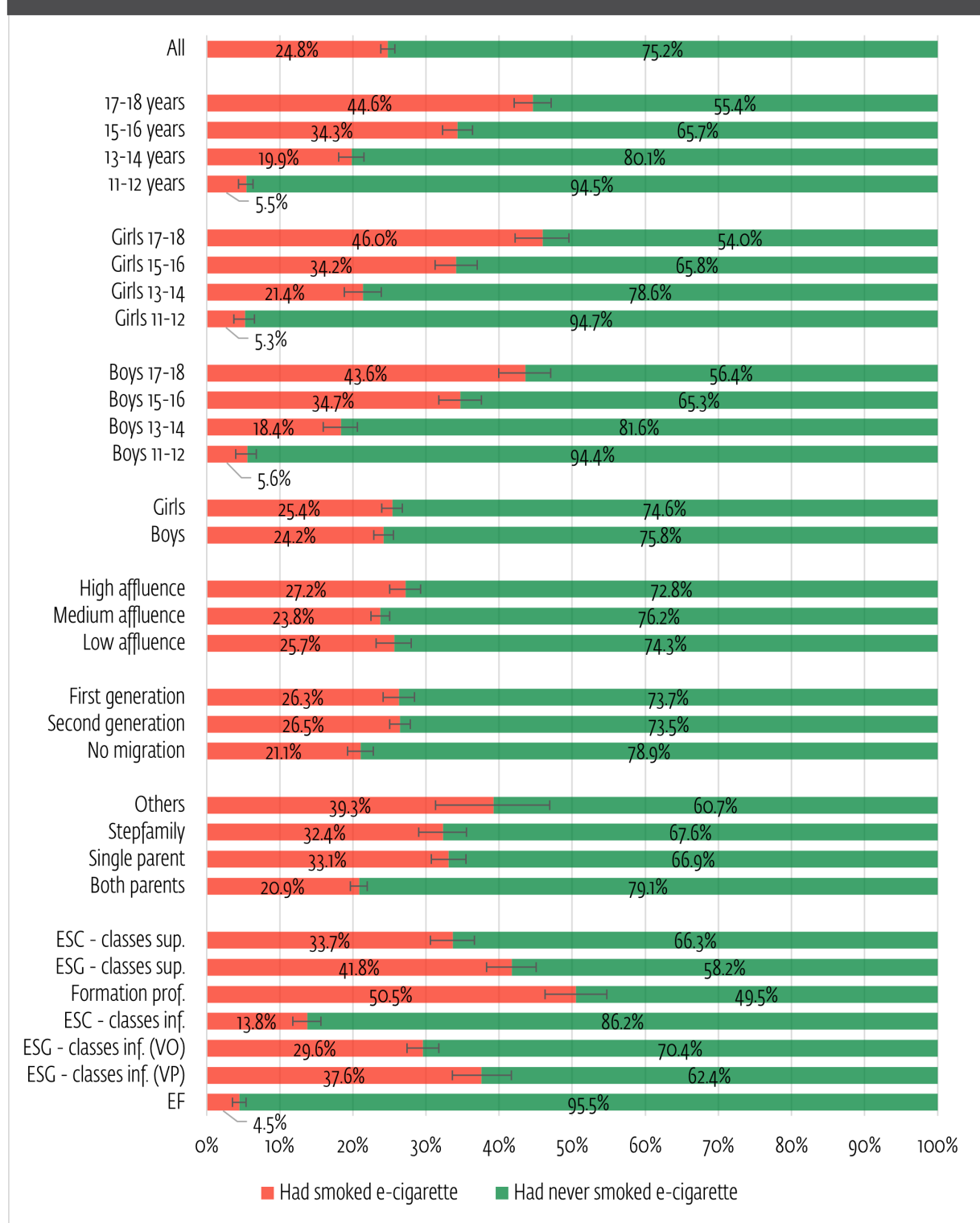
	At least 10 days (5-7)	1-9 days (2-4)	Never (1)	Chi square test
<b>All</b>				<b>N = 7 339</b>
	5.9 (5.4-6.5)	5.5 (5.0-6.1)	88.5 (87.8-89.3)	
<b>Age</b>				<b>N = 7 339</b>
11-12 years	0.3 (0.1-0.6)	0.8 (0.5-1.3)	98.9 (98.4-99.3)	
13-14 years	2.6 (1.9-3.3)	3.8 (3.0-4.7)	93.6 (92.5-94.6)	$p < .001$
15-16 years	7.0 (6.0-8.2)	7.6 (6.6-8.9)	85.3 (83.7-86.8)	$\gamma = .640$
17-18 years	16.6 (14.7-18.6)	11.3 (9.7-13.0)	72.1 (69.8-74.4)	
<b>Age x Gender</b>				<b>N = 3 598</b>
Girls 11-12	0.1 (0.0-0.5)	0.8 (0.4-1.6)	99.1 (98.2-99.5)	
Girls 13-14	2.6 (1.7-3.7)	4.8 (3.5-6.2)	92.6 (90.8-94.1)	$p < .001$
Girls 15-16	6.4 (5.0-8.0)	9.0 (7.4-11.0)	84.6 (82.2-86.7)	$\gamma = .620$
Girls 17-18	14.0 (11.6-16.8)	13.4 (11.0-16.0)	72.6 (69.2-75.8)	
				<b>N = 3 694</b>
Boys 11-12	0.4 (0.1-1.0)	0.8 (0.4-1.6)	98.8 (97.9-99.3)	
Boys 13-14	2.5 (1.7-3.7)	2.9 (2.0-4.1)	94.5 (92.9-95.8)	$p < .001$
Boys 15-16	7.6 (6.0-9.3)	6.4 (4.9-8.0)	86.1 (83.8-88.1)	$\gamma = .660$
Boys 17-18	19.0 (16.3-22.0)	9.3 (7.3-11.6)	71.7 (68.3-74.9)	
<b>Gender</b>				<b>N = 7 293</b>
Girls	5.2 (4.5-6.0)	6.6 (5.8-7.5)	88.2 (87.1-89.2)	$p < .001$
Boys	6.5 (5.8-7.4)	4.5 (3.9-5.3)	88.9 (87.9-89.9)	Cramér's V. = .052
<b>Family affluence</b>				<b>N = 7 135</b>
High	5.5 (4.4-6.7)	6.9 (5.7-8.2)	87.6 (86.0-89.2)	
Medium	6.0 (5.3-6.7)	5.0 (4.4-5.7)	89.0 (88.1-89.9)	$p = .588$
Low	6.3 (5.0-7.8)	5.5 (4.3-6.8)	88.2 (86.3-89.9)	$\gamma = .018$
<b>Migration background</b>				<b>N = 7 077</b>
First generation	6.3 (5.2-7.6)	5.8 (4.8-7.1)	87.9 (86.2-89.4)	
Second generation	5.4 (4.7-6.2)	6.0 (5.2-6.8)	88.6 (87.6-89.7)	$p = .104$
No migration	6.9 (5.9-8.1)	5.0 (4.1-6.0)	88.1 (86.6-89.5)	Cramér's V. = .023
<b>Family structure</b>				<b>N = 6 922</b>
Others	15.0 (9.7-21.3)	10.2 (5.8-15.6)	74.8 (67.8-81.9)	
Stepfamily	10.6 (8.6-13.0)	7.3 (5.6-9.3)	82.1 (79.2-84.7)	$p < .001$
Single parent	8.1 (6.8-9.6)	6.9 (5.7-8.3)	85.0 (83.1-86.8)	Cramér's V. = .087
Both parents	4.4 (3.8-5.0)	4.8 (4.2-5.4)	90.8 (90.0-91.6)	
<b>Type of school</b>				<b>N = 7 339</b>
ESC-classes sup.	6.2 (4.9-8.0)	11.4 (9.5-13.6)	82.4 (79.8-84.7)	
ESG-classes sup.	12.6 (10.4-15.0)	8.6 (6.9-10.8)	78.8 (75.9-81.5)	
Formation prof.	24.3 (20.9-28.2)	9.5 (7.2-12.2)	66.1 (62.1-70.1)	
ESC-classes inf.	1.3 (0.8-2.1)	2.7 (1.9-3.8)	95.9 (94.7-97.0)	$p < .001$
ESG-classes inf. (VO)	5.3 (4.3-6.5)	5.2 (4.2-6.4)	89.5 (88.0-91.0)	Cramér's V. = .231
ESG-classes inf. (VP)	8.1 (5.9-10.7)	10.7 (8.2-13.5)	81.2 (77.8-84.5)	
EF	0.3 (0.1-0.6)	0.6 (0.3-1.1)	99.1 (98.6-99.5)	

Respondents were asked how many days they have smoked cigarettes in the last 30 days. The answer options ranged from "never" (1) to "30 days or more" (7). Cigarette use in the last month was categorised in: at least 10 days (categories 5-to-7), 1-9 days (categories 2-to-4) and never (category 1). The results are in % (95% Confidence Interval).



E-cigarette use

Figure 33: Lifetime prevalence of e-cigarette smokers according to sociodemographic groups

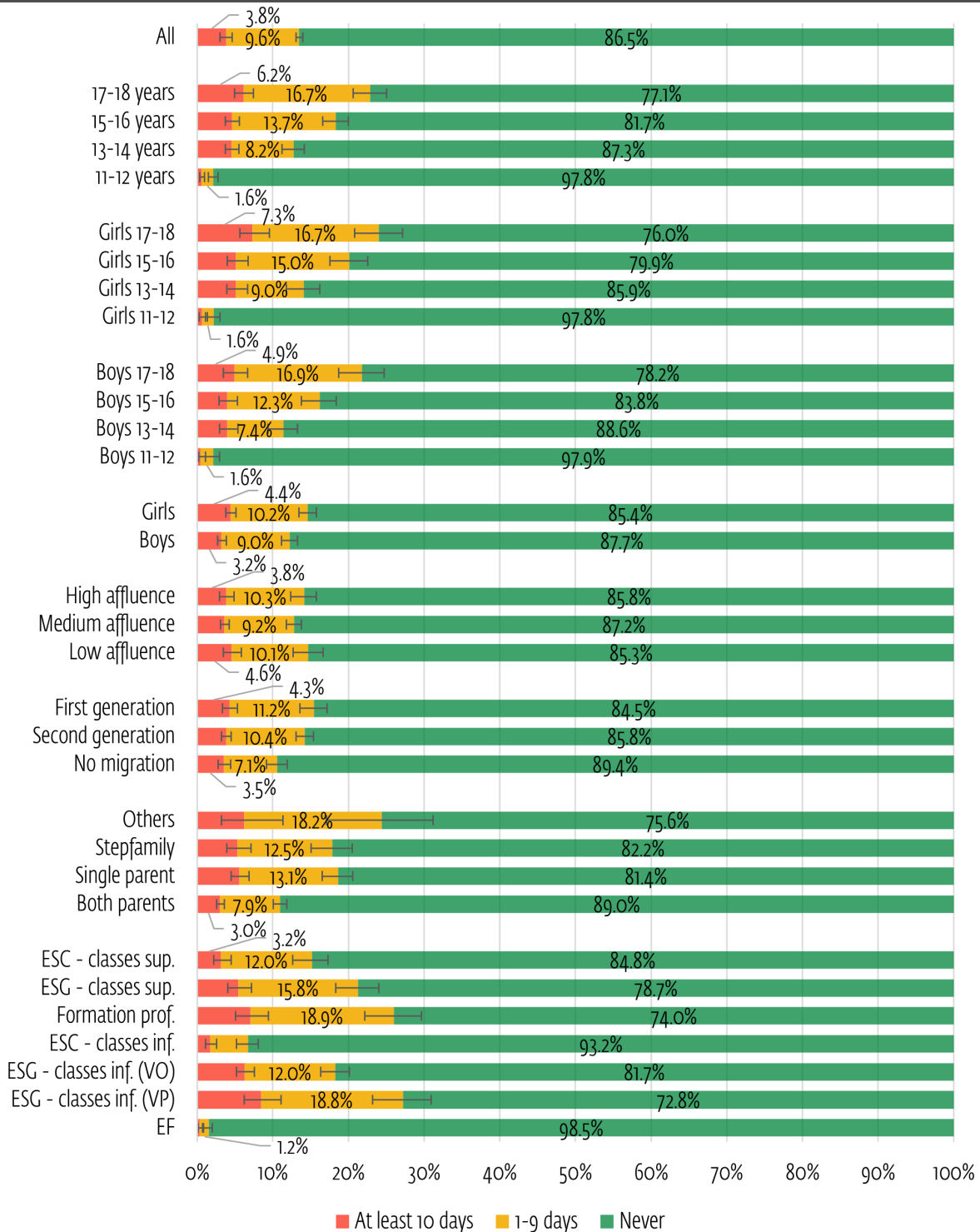


**Table 9: Lifetime prevalence of e-cigarette smokers according to sociodemographic groups**

	Had smoked e-cigarette (2-7)	Have never smoked cigarette (1)	Chi square test
<b>All</b>			<b>N = 7 625</b>
	24.8 (23.8-25.8)	75.2 (74.2-76.1)	
<b>Age</b>			<b>N = 7 625</b>
11-12 years	5.5 (4.5-6.5)	94.5 (93.4-95.4)	
13-14 years	19.9 (18.2-21.6)	80.1 (78.4-81.8)	$p < .001$
15-16 years	34.3 (32.3-36.4)	65.7 (63.6-67.7)	$\gamma = .550$
17-18 years	44.6 (42.1-47.2)	55.4 (52.8-57.9)	
<b>Age x Gender</b>			<b>N = 3 708</b>
Girls 11-12	5.3 (4.0-6.8)	94.7 (93.2-96.0)	
Girls 13-14	21.4 (19.0-24.0)	78.6 (76.0-81.0)	$p < .001$
Girls 15-16	34.2 (31.3-37.1)	65.8 (62.9-68.7)	$\gamma = .550$
Girls 17-18	46.0 (42.4-49.7)	54.0 (50.3-57.6)	
			<b>N = 3 867</b>
Boys 11-12	5.6 (4.3-7.1)	94.4 (92.8-95.6)	
Boys 13-14	18.4 (16.2-20.9)	81.6 (79.1-83.8)	$p < .001$
Boys 15-16	34.7 (31.8-37.6)	65.3 (62.4-68.2)	$\gamma = .554$
Boys 17-18	43.6 (40.1-47.2)	56.4 (52.8-59.9)	
<b>Gender</b>			<b>N = 7 575</b>
Girls	25.4 (24.0-26.8)	74.6 (73.2-76.0)	$p = .234$
Boys	24.2 (22.9-25.6)	75.8 (74.4-77.1)	Cramér's V. = .014
<b>Family affluence</b>			<b>N = 7 416</b>
High	27.2 (25.1-29.3)	72.8 (70.7-74.9)	$p = .193$
Medium	23.8 (22.6-25.1)	76.2 (74.9-77.4)	$\gamma = .032$
Low	25.7 (23.3-28.1)	74.3 (71.9-76.7)	
<b>Migration background</b>			<b>N = 7 343</b>
First generation	26.3 (24.2-28.5)	73.7 (71.5-75.8)	$p < .001$
Second generation	26.5 (25.0-27.9)	73.5 (72.1-75.0)	Cramér's V. = .055
No migration	21.1 (19.3-22.9)	78.9 (77.1-80.7)	
<b>Family structure</b>			<b>N = 7 190</b>
Others	39.3 (31.6-47.2)	60.7 (52.8-68.4)	$p < .001$
Stepfamily	32.4 (29.1-35.7)	67.6 (64.3-70.9)	Cramér's V. = .137
Single parent	33.1 (30.8-35.5)	66.9 (64.5-69.2)	
Both parents	20.9 (19.7-22.0)	79.1 (78.0-80.3)	
<b>Type of school</b>			<b>N = 7 625</b>
ESC-classes sup.	33.7 (30.7-36.7)	66.3 (63.3-69.3)	
ESG-classes sup.	41.8 (38.4-45.2)	58.2 (54.8-61.6)	
Formation prof.	50.5 (46.2-54.7)	49.5 (45.3-53.8)	$p < .001$
ESC-classes inf.	13.8 (11.9-15.8)	86.2 (84.2-88.1)	Cramér's V. = .346
ESG-classes inf. (VO)	29.6 (27.4-31.8)	70.4 (68.2-72.6)	
ESG-classes inf. (VP)	37.6 (33.7-41.8)	62.4 (58.4-66.5)	
EF	4.5 (3.6-5.5)	95.5 (94.6-96.4)	

Respondents were asked how many days they have smoked e-cigarettes in their lifetime. The answer options ranged from "never" (1) to "30 days or more" (7). E-cigarette use in the lifetime was categorised in: had smoked e-cigarette (categories 2-to-7) and had never smoked e-cigarette (category 1). The results are in % (95% Confidence Interval).

Figure 34: Prevalence of e-cigarette smokers over the last month according to sociodemographic groups



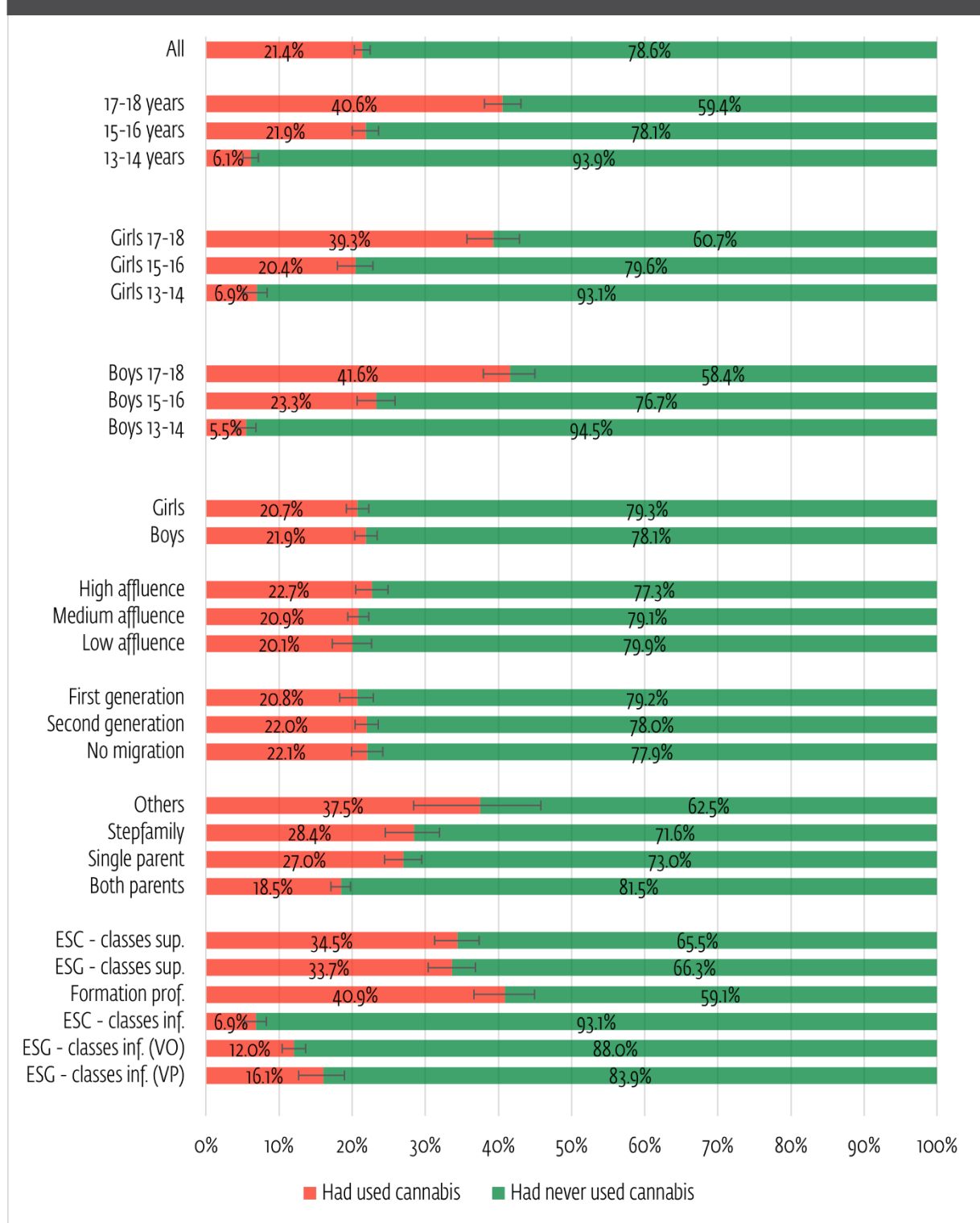
**Table 10: Prevalence of e-cigarette smokers over the last month according to sociodemographic groups**

	At least 10 days (5-7)	1-9 days (2-4)	Never (1)	Chi square test
<b>All</b>				<b>N = 7 286</b>
	3.8 (3.4-4.3)	9.6 (9.0-10.3)	86.5 (85.7-87.3)	
<b>Age</b>				<b>N = 7 286</b>
11-12 years	0.6 (0.3-1.0)	1.6 (1.1-2.2)	97.8 (97.2-98.5)	
13-14 years	4.6 (3.7-5.5)	8.2 (7.0-9.4)	87.3 (85.7-88.7)	$p < .001$
15-16 years	4.6 (3.8-5.6)	13.7 (12.3-15.3)	81.7 (79.9-83.3)	$\chi = .449$
17-18 years	6.2 (5.0-7.5)	16.7 (14.8-18.7)	77.1 (74.9-79.3)	
<b>Age x Gender</b>				<b>N = 3 581</b>
Girls 11-12	0.6 (0.3-1.3)	1.6 (0.9-2.5)	97.8 (96.7-98.6)	
Girls 13-14	5.1 (3.9-6.7)	9.0 (7.3-10.9)	85.9 (83.7-88.0)	$p < .001$
Girls 15-16	5.2 (4.0-6.7)	15.0 (12.9-17.3)	79.9 (77.3-82.3)	$\chi = .445$
Girls 17-18	7.3 (5.6-9.5)	16.7 (14.0-19.6)	76.0 (72.8-79.1)	
				<b>N = 3 657</b>
Boys 11-12	0.5 (0.2-1.1)	1.6 (1.0-2.6)	97.9 (96.9-98.7)	
Boys 13-14	4.0 (2.9-5.4)	7.4 (5.9-9.2)	88.6 (86.5-90.5)	$p < .001$
Boys 15-16	4.0 (2.9-5.4)	12.3 (10.3-14.4)	83.8 (81.3-86.0)	$\chi = .456$
Boys 17-18	4.9 (3.5-6.6)	16.9 (14.3-19.7)	78.2 (75.1-81.1)	
<b>Gender</b>				<b>N = 7 238</b>
Girls	4.4 (3.8-5.1)	10.2 (9.2-11.2)	85.4 (84.2-86.5)	$p = .006$
Boys	3.2 (2.7-3.8)	9.0 (8.1-10.0)	87.7 (86.6-88.8)	Cramér's V. = .038
<b>Family affluence</b>				<b>N = 7 090</b>
High	3.8 (3.0-4.9)	10.3 (8.9-11.9)	85.8 (84.0-87.4)	
Medium	3.6 (3.1-4.2)	9.2 (8.3-10.1)	87.2 (86.2-88.2)	$p = .846$
Low	4.6 (3.5-5.8)	10.1 (8.5-11.9)	85.3 (83.3-87.2)	$\chi = -.006$
<b>Migration background</b>				<b>N = 7 023</b>
First generation	4.3 (3.3-5.3)	11.2 (9.7-12.8)	84.5 (82.7-86.3)	
Second generation	3.9 (3.2-4.5)	10.4 (9.4-11.4)	85.8 (84.6-86.9)	$p < .001$
No migration	3.5 (2.8-4.4)	7.1 (6.0-8.2)	89.4 (88.0-90.7)	Cramér's V. = .041
<b>Family structure</b>				<b>N = 6 873</b>
Others	6.2 (3.2-11.3)	18.2 (12.7-25.4)	75.6 (68.3-82.4)	
Stepfamily	5.3 (3.9-7.1)	12.5 (10.3-15.1)	82.2 (79.4-84.8)	$p < .001$
Single parent	5.6 (4.5-6.9)	13.1 (11.4-14.9)	81.4 (79.3-83.3)	Cramér's V. = .078
Both parents	3.0 (2.6-3.6)	7.9 (7.2-8.8)	89.0 (88.1-89.9)	
<b>Type of school</b>				<b>N = 7 286</b>
ESC-classes sup.	3.2 (2.2-4.5)	12.0 (10.0-14.2)	84.8 (82.3-87.0)	
ESG-classes sup.	5.5 (4.0-7.2)	15.8 (13.4-18.5)	78.7 (75.8-81.5)	
Formation prof.	7.1 (5.1-9.4)	18.9 (15.8-22.5)	74.0 (70.1-77.6)	
ESC-classes inf.	1.7 (1.1-2.6)	5.0 (3.9-6.4)	93.2 (91.7-94.6)	$p < .001$
ESG-classes inf. (VO)	6.3 (5.2-7.6)	12.0 (10.4-13.6)	81.7 (79.8-83.6)	Cramér's V. = .186
ESG-classes inf. (VP)	8.4 (6.3-11.1)	18.8 (15.6-22.4)	72.8 (68.8-76.5)	
EF	0.4 (0.1-0.7)	1.2 (0.8-1.8)	98.5 (97.8-98.9)	

Respondents were asked how many days they have smoked e-cigarettes in the last 30 days. The answer options ranged from "never" (1) to "30 days or more" (7). E-cigarette use in the last month was categorised in: at least 10 days (categories 5-to-7), 1-9 days (categories 2-to-4) and never (category 1). The results are in % (95% Confidence Interval).

Cannabis use

Figure 35: Lifetime prevalence of cannabis use according to sociodemographic groups

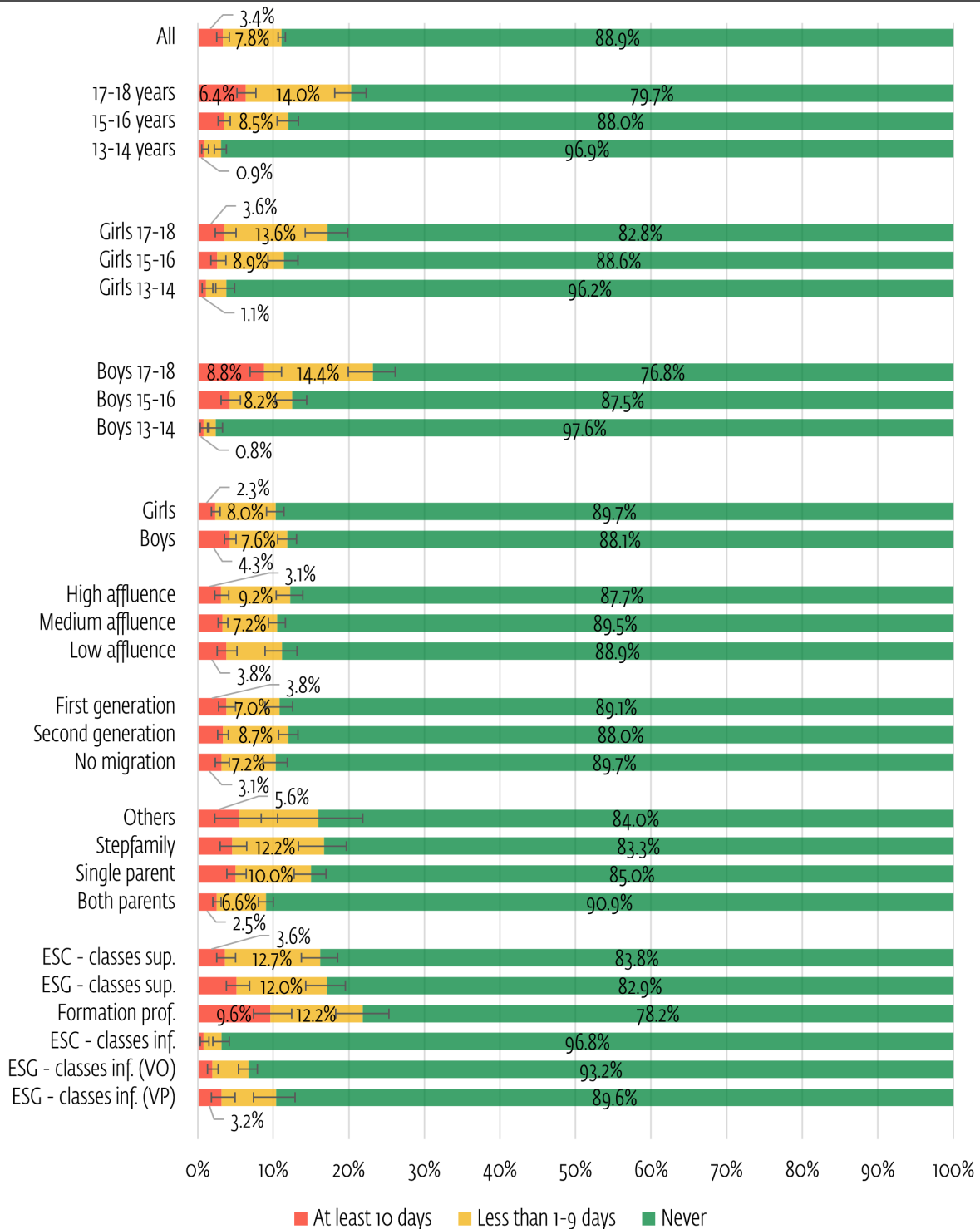


**Table 11: Lifetime prevalence of cannabis use according to sociodemographic groups**

	Had used cannabis (2-7)	Have never used cannabis (1)	Chi square test
<b>All</b>			<b>N = 5 478</b>
	21.4 (20.3-22.5)	78.6 (77.5-79.7)	
<b>Age</b>			<b>N = 5 478</b>
13-14 years	6.1 (5.2-7.3)	93.9 (92.7-94.9)	$p < .001$ $\gamma = .611$
15-16 years	21.9 (20.1-23.7)	78.1 (76.3-79.9)	
17-18 years	40.6 (38.1-43.1)	59.4 (56.9-61.9)	
<b>Age x Gender</b>			<b>N = 2 672</b>
Girls 13-14	6.9 (5.5-8.7)	93.1 (91.3-94.5)	$p < .001$ $\gamma = .584$
Girls 15-16	20.4 (18.1-23.0)	79.6 (77.1-82.0)	
Girls 17-18	39.3 (35.8-42.9)	60.7 (57.1-64.2)	
			<b>N = 2 763</b>
Boys 13-14	5.5 (4.2-7.1)	94.5 (93.1-95.9)	$p < .001$ $\gamma = .632$
Boys 15-16	23.3 (20.8-26.0)	76.7 (74.1-79.3)	
Boys 17-18	41.6 (38.1-45.2)	58.4 (54.8-61.9)	
<b>Gender</b>			<b>N = 5 435</b>
Girls	20.7 (19.2-22.3)	79.3 (77.7-80.8)	$p = .296$ Cramér's V. = .014
Boys	21.9 (20.4-23.5)	78.1 (76.5-79.6)	
<b>Family affluence</b>			<b>N = 5 339</b>
High	22.7 (20.5-24.9)	77.3 (75.1-79.5)	$p = .105$ $\gamma = .049$
Medium	20.9 (19.4-22.3)	79.1 (77.7-80.6)	
Low	20.1 (17.5-22.8)	79.9 (77.2-82.5)	
<b>Migration background</b>			<b>N = 5 274</b>
First generation	20.8 (18.5-23.1)	79.2 (76.8-81.4)	$p = .635$ Cramér's V. = .013
Second generation	22.0 (20.5-23.6)	78.0 (76.3-79.5)	
No migration	22.1 (20.0-24.2)	77.9 (75.8-80.0)	
<b>Family structure</b>			<b>N = 5 183</b>
Others	37.5 (29.2-46.6)	62.5 (53.4-70.8)	$p < .001$ Cramér's V. = .118
Stepfamily	28.4 (24.8-32.2)	71.6 (67.6-75.1)	
Single parent	27.0 (24.5-29.6)	73.0 (70.4-75.5)	
Both parents	18.5 (17.2-19.8)	81.5 (80.2-82.8)	
<b>Type of school</b>			<b>N = 5 478</b>
ESC-classes sup.	34.5 (31.4-37.5)	65.5 (62.4-68.5)	$p < .001$ Cramér's V. = .307
ESG-classes sup.	33.7 (30.5-36.9)	66.3 (63.1-69.5)	
Formation prof.	40.9 (36.8-45.1)	59.1 (54.9-63.2)	
ESC-classes inf.	6.9 (5.4-8.5)	93.1 (91.5-94.6)	
ESG-classes inf. (VO)	12.0 (10.5-13.7)	88.0 (86.3-89.5)	
ESG-classes inf. (VP)	16.1 (13.2-19.5)	83.9 (80.5-86.8)	

Respondents aged 13-18 from secondary schools only were asked how many days they have taken cannabis in their lifetime. The answer options ranged from "never" (1) to "30 days or more" (7). Cannabis use in the lifetime was categorised in: had used cannabis (categories 2-to-7) and had never used cannabis (category 1). The results are in % (95% Confidence Interval).

Figure 36: Prevalence of cannabis use over the last month according to sociodemographic groups



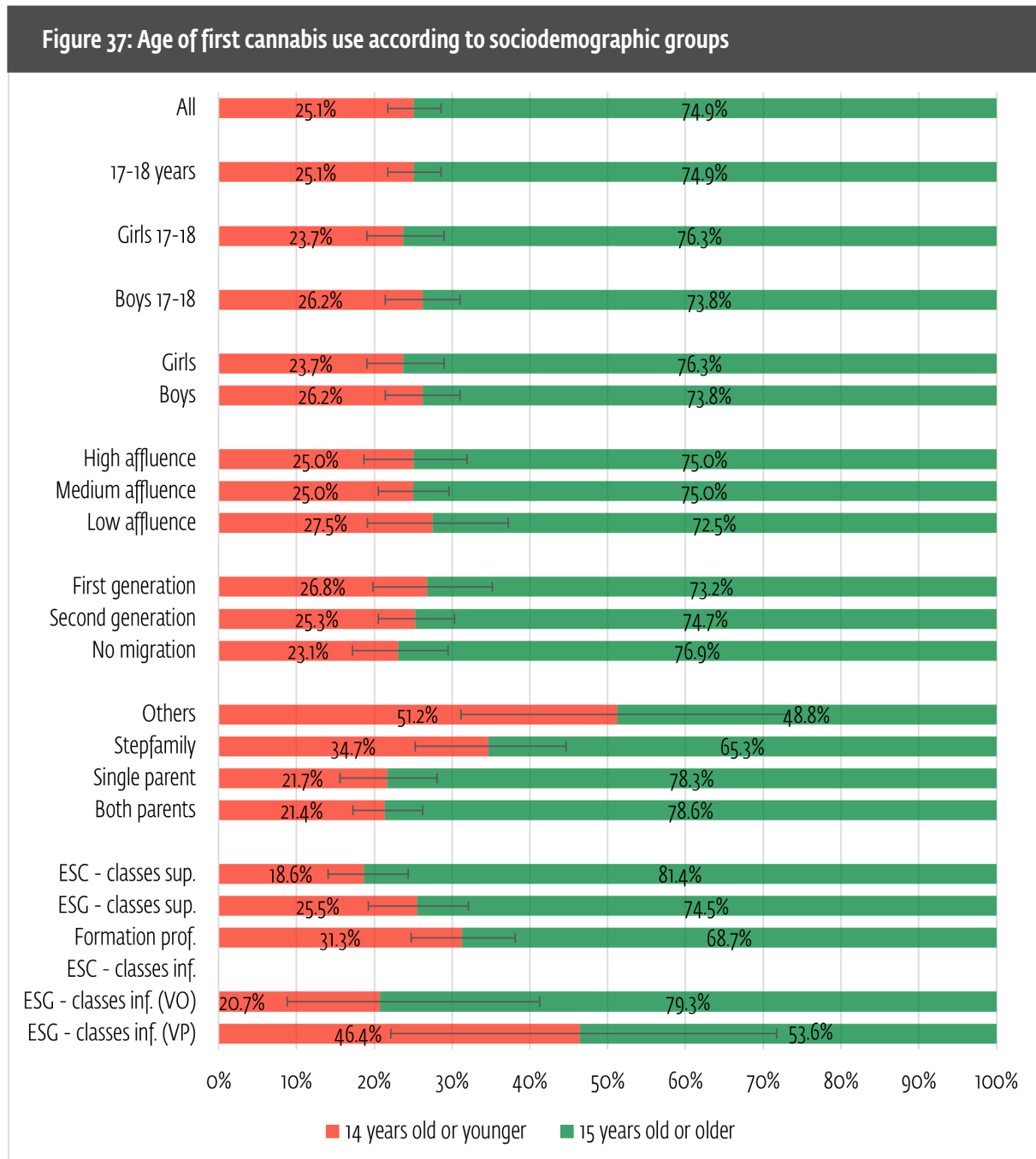
**Table 12: Prevalence of cannabis use over the last month according to sociodemographic groups**

	At least 10 days (5-7)	1-9 days (2-4)	Never (1)	Chi square test
<b>All</b>				<b>N = 5 228</b>
	3.4 (2.9-3.9)	7.8 (7.1-8.5)	88.9 (88.0-89.7)	
<b>Age</b>				<b>N = 5 228</b>
13-14 years	0.9 (0.6-1.5)	2.1 (1.6-2.9)	96.9 (96.0-97.6)	$p < .001$ $\chi^2 = .527$
15-16 years	3.5 (2.7-4.3)	8.5 (7.3-9.8)	88.0 (86.6-89.4)	
17-18 years	6.4 (5.2-7.7)	14 (12.2-15.8)	79.7 (77.5-81.7)	
<b>Age x Gender</b>				<b>N = 2 571</b>
Girls 13-14	1.1 (0.6-2.0)	2.7 (1.8-3.9)	96.2 (94.8-97.3)	$p < .001$ $\chi^2 = .443$
Girls 15-16	2.6 (1.8-3.8)	8.9 (7.2-10.7)	88.6 (86.4-90.4)	
Girls 17-18	3.6 (2.3-5.1)	13.6 (11.3-16.4)	82.8 (79.9-85.5)	
				<b>N = 2 616</b>
Boys 13-14	0.8 (0.3-1.5)	1.6 (1.0-2.6)	97.6 (96.4-98.4)	$p < .001$ $\chi^2 = .592$
Boys 15-16	4.3 (3.1-5.6)	8.2 (6.6-10.0)	87.5 (85.3-89.4)	
Boys 17-18	8.8 (6.9-11.1)	14.4 (11.9-17.1)	76.8 (73.6-79.8)	
<b>Gender</b>				<b>N = 5 186</b>
Girls	2.3 (1.8-3.0)	8.0 (7.0-9.1)	89.7 (88.4-90.8)	$p < .001$ Cramér's V. = .054
Boys	4.3 (3.6-5.1)	7.6 (6.6-8.7)	88.1 (86.8-89.3)	
<b>Family affluence</b>				<b>N = 5 102</b>
High	3.1 (2.3-4.1)	9.2 (7.7-10.8)	87.7 (85.8-89.4)	$p = .311$ $\chi^2 = .040$
Medium	3.3 (2.7-4.0)	7.2 (6.4-8.2)	89.5 (88.3-90.5)	
Low	3.8 (2.6-5.2)	7.3 (5.7-9.3)	88.9 (86.6-90.9)	
<b>Migration background</b>				<b>N = 5 046</b>
First generation	3.8 (2.8-5.0)	7.0 (5.7-8.7)	89.1 (87.2-90.8)	$p = .268$ Cramér's V. = .023
Second generation	3.3 (2.7-4.1)	8.7 (7.6-9.8)	88.0 (86.7-89.2)	
No migration	3.1 (2.3-4.2)	7.2 (5.9-8.6)	89.7 (88.0-91.2)	
<b>Family structure</b>				<b>N = 4 946</b>
Others	5.6 (2.2-10.6)	10.4 (5.9-17.3)	84.0 (76.5-89.9)	$p < .001$ Cramér's V. = .072
Stepfamily	4.6 (3.0-6.5)	12.2 (9.6-15.2)	83.3 (79.9-86.3)	
Single parent	5.0 (3.9-6.5)	10.0 (8.3-11.9)	85.0 (82.8-87.0)	
Both parents	2.5 (2.0-3.1)	6.6 (5.7-7.4)	90.9 (89.9-91.9)	
<b>Type of school</b>				<b>N = 5 228</b>
ESC-classes sup.	3.6 (2.6-5.0)	12.7 (10.6-14.9)	83.8 (81.2-86.0)	$p < .001$ Cramér's V. = .150
ESG-classes sup.	5.1 (3.8-6.9)	12.0 (9.9-14.4)	82.9 (80.1-85.3)	
Formation prof.	9.6 (7.4-12.5)	12.2 (9.6-15.2)	78.2 (74.6-81.7)	
ESC-classes inf.	0.8 (0.4-1.5)	2.4 (1.6-3.4)	96.8 (95.7-97.8)	
ESG-classes inf. (VO)	1.9 (1.3-2.7)	4.8 (3.9-6.0)	93.2 (91.8-94.4)	
ESG-classes inf. (VP)	3.2 (1.8-5.0)	7.2 (5.2-9.9)	89.6 (86.6-92.1)	

Respondents aged 13-18 from secondary schools only were asked how many days they have taken cannabis in the last 30 days. The answer options ranged from "never" (1) to "30 days or more" (7). Cannabis use in the last month was categorised in: at least 10 days (categories 5-to-7), 1-9 days (categories 2-to-4) and never (category 1). The results are in % (95% Confidence Interval).



## Age at first use of cannabis



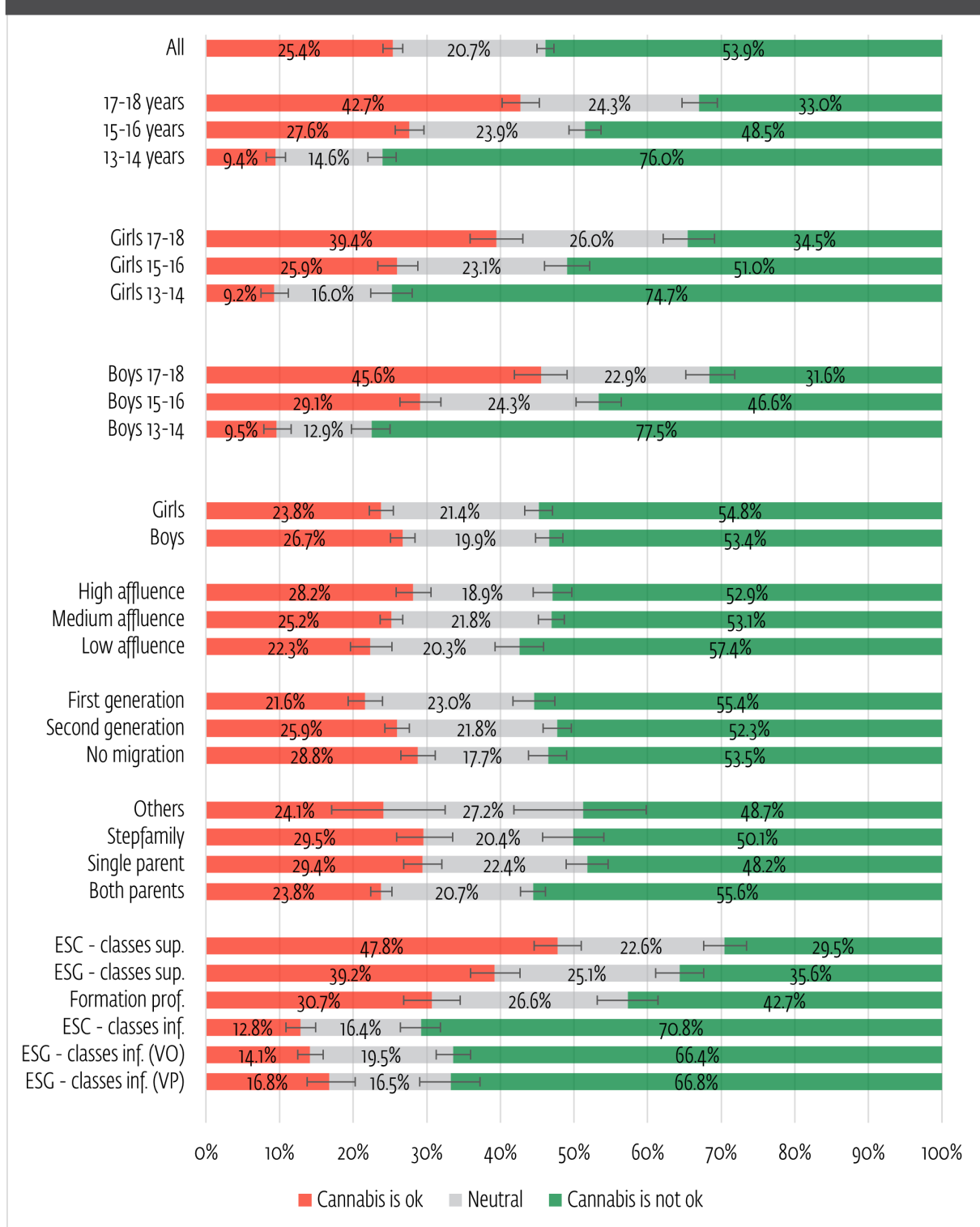
**Table 13: Age of cannabis first age according to sociodemographic groups**

	14 years old or younger	15 years old or older	Chi square test
<b>All</b>			<b>N = 611</b>
	25.1 (21.7-28.6)	74.9 (71.4-78.3)	
<b>Age</b>			<b>N = 611</b>
17-18 years	25.1 (21.7-28.6)	74.9 (71.4-78.3)	
<b>Age x Gender</b>			<b>N = 282</b>
Girls 17-18	23.7 (19.1-29.0)	76.3 (71.0-80.9)	
			<b>N = 323</b>
Boys 17-18	26.2 (21.5-31.0)	73.8 (68.7-78.3)	
<b>Gender</b>			<b>N = 605</b>
Girls	23.7 (19.1-29.0)	76.3 (71.0-80.9)	$p = .486$
Boys	26.2 (21.5-31.0)	73.8 (68.7-78.3)	Cramér's V. = .028
<b>Family affluence</b>			<b>N = 593</b>
High	25.0 (18.7-31.9)	75.0 (67.4-80.8)	$p = .729$
Medium	25.0 (20.5-29.6)	75.0 (70.1-79.2)	$\gamma = .029$
Low	27.5 (19.1-37.2)	72.5 (62.8-80.9)	
<b>Migration background</b>			<b>N = 603</b>
First generation	26.8 (19.8-35.2)	73.2 (64.8-80.2)	$p = .751$
Second generation	25.3 (20.5-30.3)	74.7 (69.7-79.5)	Cramér's V. = .031
No migration	23.1 (17.2-29.5)	76.9 (70.5-82.8)	
<b>Family structure</b>			<b>N = 594</b>
Others	51.2 (31.2-73.4)	48.8 (26.6-68.8)	
Stepfamily	34.7 (25.2-44.6)	65.3 (55.4-74.8)	$p = .002$
Single parent	21.7 (15.6-28.1)	78.3 (71.3-83.9)	Cramér's V. = .158
Both parents	21.4 (17.3-26.2)	78.6 (74.1-83.0)	
<b>Type of school</b>			<b>N = 611</b>
ESC-classes sup.	18.6 (14-24.4)	81.4 (76.1-86.4)	
ESG-classes sup.	25.5 (19.3-32.1)	74.5 (67.9-80.7)	
Formation prof.	31.3 (24.8-38.1)	68.7 (61.9-75.2)	$p = .017$
ESC-classes inf.	0.0 (0.0-0.0)	0.0 (0.0-0.0)	Cramér's V. = .140
ESG-classes inf. (VO)	20.7 (8.8-41.3)	79.3 (58.7-91.2)	
ESG-classes inf. (VP)	46.4 (22.1-71.7)	53.6 (28.3-77.9)	

Respondents aged 17-18 from secondary schools only were asked how old they were at their first cannabis use. The answer options ranged from "never" (1) to "18 years or older" (9). Age at first use of cannabis was categorised based on the split of quartile (14 years old as the cut-off): 14 years old or younger and 15 years old or older. The results are in % (95% Confidence Interval).

### Cannabis acceptability

Figure 38: Cannabis acceptability by friends according to sociodemographic groups

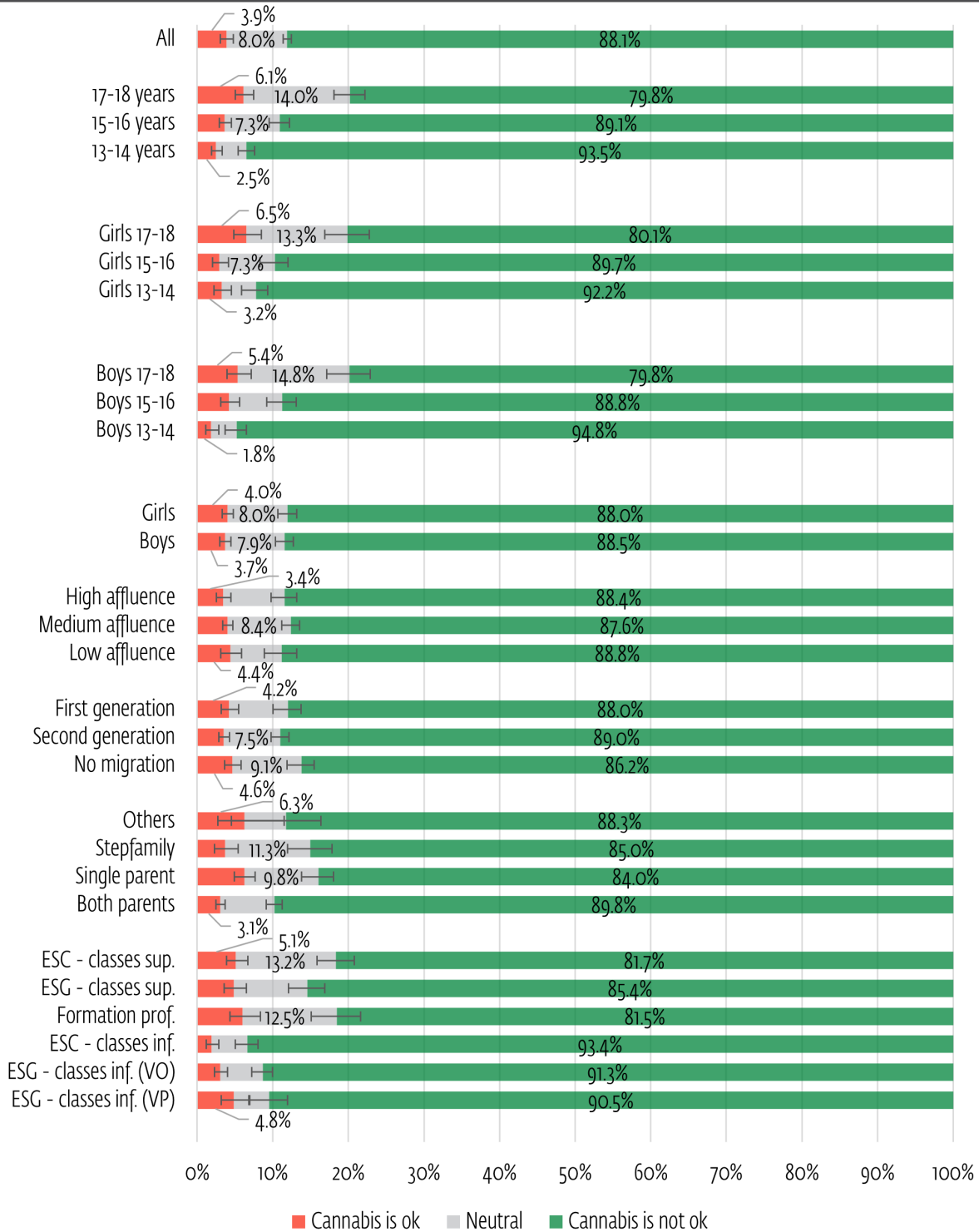


**Table 14: Cannabis acceptability by friends according to sociodemographic groups**

	Cannabis is ok (1-2)	Neutral (3)	Cannabis is not ok (4-5)	Chi square test
<b>All</b>				<b>N = 5 410</b>
	25.4 (24.2-26.6)	20.7 (19.7-21.8)	53.9 (52.6-55.2)	
<b>Age</b>				<b>N = 5 410</b>
13-14 years	9.4 (8.2-10.8)	14.6 (13.0-16.2)	76.0 (74.0-77.9)	$p < .001$
15-16 years	27.6 (25.7-29.6)	23.9 (22.1-25.7)	48.5 (46.4-50.7)	$\gamma = .495$
17-18 years	42.7 (40.2-45.3)	24.3 (22.2-26.5)	33.0 (30.6-35.5)	
<b>Age x Gender</b>				<b>N = 2 638</b>
Girls 13-14	9.2 (7.4-11.2)	16.0 (13.8-18.6)	74.7 (71.8-77.5)	$p < .001$
Girls 15-16	25.9 (23.4-28.7)	23.1 (20.6-25.8)	51.0 (47.9-54.1)	$\gamma = .464$
Girls 17-18	39.4 (35.9-43.0)	26.0 (22.9-29.3)	34.5 (31.2-38.2)	
				<b>N = 2 728</b>
Boys 13-14	9.5 (7.8-11.6)	12.9 (10.9-15.1)	77.5 (74.8-80.1)	$p < .001$
Boys 15-16	29.1 (26.3-31.9)	24.3 (21.7-27.0)	46.6 (43.6-49.7)	$\gamma = .525$
Boys 17-18	45.6 (41.9-49.0)	22.9 (19.9-25.9)	31.6 (28.3-35.0)	
<b>Gender</b>				<b>N = 5 366</b>
Girls	23.8 (22.2-25.4)	21.4 (19.9-23.1)	54.8 (52.9-56.7)	$p = .035$
Boys	26.7 (25.1-28.4)	19.9 (18.4-21.4)	53.4 (51.5-55.2)	Cramér's V. = .035
<b>Family affluence</b>				<b>N = 5 277</b>
High	28.2 (25.8-30.6)	18.9 (16.9-21.0)	52.9 (50.3-55.6)	$p = .014$
Medium	25.2 (23.6-26.7)	21.8 (20.3-23.3)	53.1 (51.3-54.8)	$\gamma = .053$
Low	22.3 (19.6-25.2)	20.3 (17.6-23.0)	57.4 (54.1-60.7)	
<b>Migration background</b>				<b>N = 5 212</b>
First generation	21.6 (19.3-24.0)	23.0 (20.7-25.5)	55.4 (52.6-58.3)	$p < .001$
Second generation	25.9 (24.3-27.6)	21.8 (20.2-23.4)	52.3 (50.4-54.2)	Cramér's V. = .049
No migration	28.8 (26.5-31.2)	17.7 (15.8-19.8)	53.5 (50.9-56.1)	
<b>Family structure</b>				<b>N = 5 128</b>
Others	24.1 (17.1-32.5)	27.2 (20.1-36.2)	48.7 (39.3-57.3)	
Stepfamily	29.5 (25.9-33.5)	20.4 (17.2-23.9)	50.1 (46.0-54.3)	$p < .001$
Single parent	29.4 (26.8-32.0)	22.4 (20.1-24.9)	48.2 (45.4-51.1)	Cramér's V. = .052
Both parents	23.8 (22.4-25.3)	20.7 (19.3-22.1)	55.6 (53.9-57.3)	
<b>Type of school</b>				<b>N = 5 410</b>
ESC-classes sup.	47.8 (44.6-51.0)	22.6 (20.0-25.4)	29.5 (26.7-32.6)	
ESG-classes sup.	39.2 (36.0-42.6)	25.1 (22.3-28.2)	35.6 (32.4-38.9)	
Formation prof.	30.7 (26.9-34.6)	26.6 (23.0-30.4)	42.7 (38.5-46.8)	$p < .001$
ESC-classes inf.	12.8 (10.9-14.9)	16.4 (14.3-18.7)	70.8 (67.9-73.4)	Cramér's V. = .259
ESG-classes inf. (VO)	14.1 (12.4-15.9)	19.5 (17.6-21.5)	66.4 (64.1-68.8)	
ESG-classes inf. (VP)	16.8 (13.8-20.3)	16.5 (13.4-19.9)	66.8 (62.5-70.7)	

Respondents aged 13-18 from secondary schools only were asked if their friends think that it is ok to use cannabis. The answer options ranged from "I strongly agree" (1) to "I strongly disagree" (5). Cannabis acceptability of friends was categorised in: cannabis is ok (categories 1-to-2), neutral (category 3) and cannabis is not ok (categories 4-to-5). The results are in % (95% Confidence Interval).

Figure 39: Cannabis acceptability by parents according to sociodemographic groups

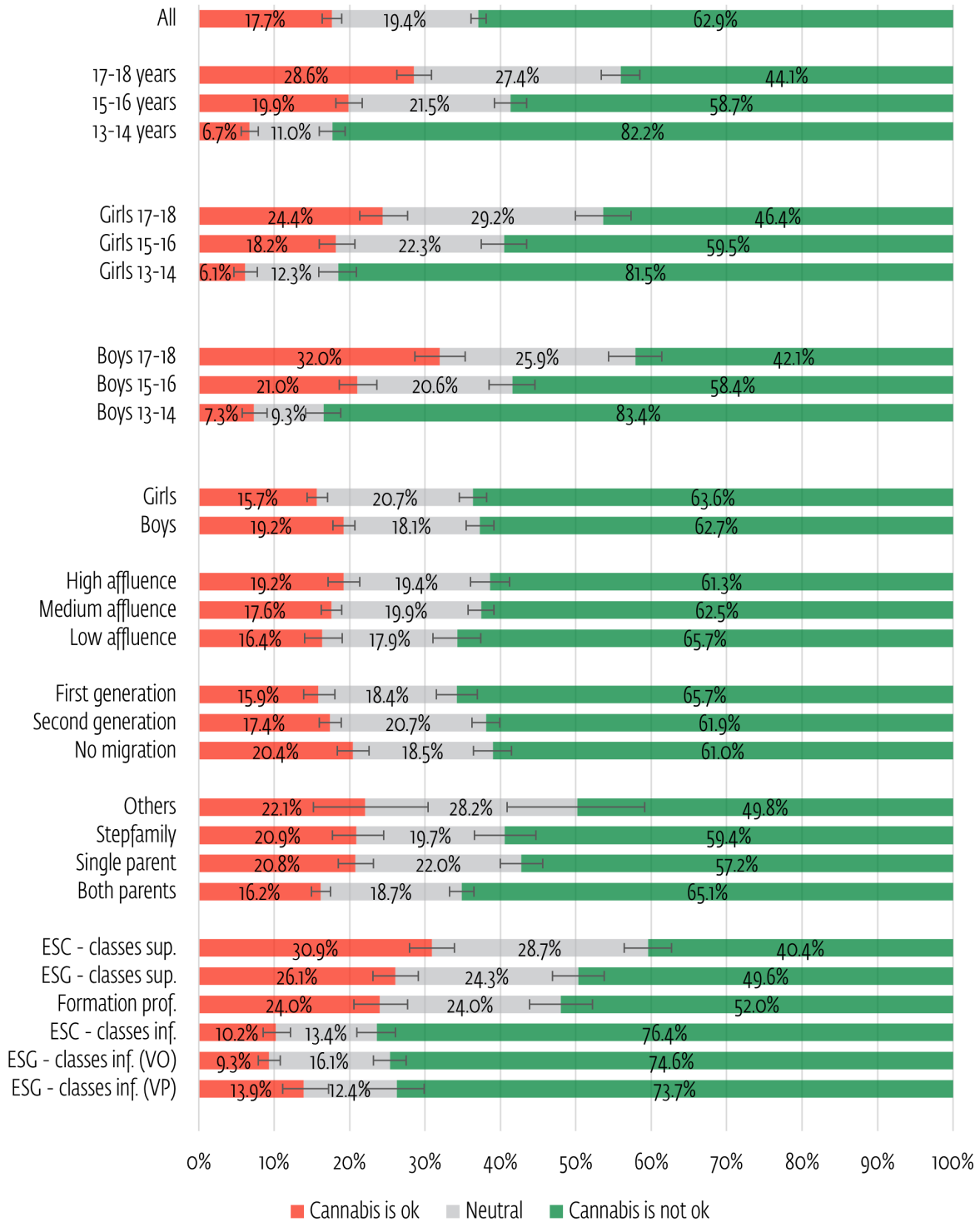


**Table 15: Cannabis acceptability by parents according to sociodemographic groups**

	Cannabis is ok (1-2)	Neutral (3)	Cannabis is not ok (4-5)	Chi square test
<b>All</b>				<b>N = 5 412</b>
	3.9 (3.4-4.5)	8.0 (7.3-8.7)	88.1 (87.2-89.0)	
<b>Age</b>				<b>N = 5 412</b>
13-14 years	2.5 (1.9-3.3)	4.0 (3.2-5.0)	93.5 (92.3-94.6)	$p < .001$ $\gamma = .382$
15-16 years	3.6 (2.9-4.5)	7.3 (6.2-8.5)	89.1 (87.6-90.3)	
17-18 years	6.1 (5.0-7.5)	14.0 (12.3-15.9)	79.8 (77.7-81.8)	
<b>Age x Gender</b>				<b>N = 2 648</b>
Girls 13-14	3.2 (2.3-4.6)	4.5 (3.4-6.1)	92.2 (90.3-93.8)	$p < .001$ $\gamma = .329$
Girls 15-16	2.9 (2.0-4.1)	7.3 (5.9-9.1)	89.7 (87.7-91.5)	
Girls 17-18	6.5 (4.9-8.5)	13.3 (11.0-16.0)	80.1 (77.1-83.0)	
				<b>N = 2 720</b>
Boys 13-14	1.8 (1.2-2.9)	3.4 (2.3-4.6)	94.8 (93.3-96.1)	$p < .001$ $\gamma = .434$
Boys 15-16	4.2 (3.1-5.6)	7.0 (5.6-8.7)	88.8 (86.8-90.7)	
Boys 17-18	5.4 (3.9-7.2)	14.8 (12.4-17.5)	79.8 (76.8-82.6)	
<b>Gender</b>				<b>N = 5 368</b>
Girls	4.0 (3.3-4.8)	8.0 (7.0-9.0)	88.0 (86.8-89.2)	$p = .820$
Boys	3.7 (3.0-4.4)	7.9 (6.9-8.9)	88.5 (87.3-89.7)	Cramér's V. = .009
<b>Family affluence</b>				<b>N = 5 283</b>
High	3.4 (2.5-4.5)	8.2 (6.8-9.7)	88.4 (86.6-90.0)	$p = .962$ $\gamma = -.002$
Medium	4.0 (3.3-4.7)	8.4 (7.4-9.4)	87.6 (86.4-88.8)	
Low	4.4 (3.1-5.9)	6.8 (5.3-8.7)	88.8 (86.6-90.8)	
<b>Migration background</b>				<b>N = 5 212</b>
First generation	4.2 (3.2-5.5)	7.8 (6.4-9.4)	88.0 (86.0-89.8)	$p = .125$ Cramér's V. = .026
Second generation	3.5 (2.8-4.2)	7.5 (6.6-8.6)	89.0 (87.7-90.1)	
No migration	4.6 (3.6-5.8)	9.1 (7.7-10.7)	86.2 (84.3-87.9)	
<b>Family structure</b>				<b>N = 5 124</b>
Others	6.3 (2.7-11.5)	5.5 (2.2-10.3)	88.3 (81.1-92.9)	$p < .001$ Cramér's V. = .065
Stepfamily	3.7 (2.3-5.4)	11.3 (8.8-14.0)	85.0 (82.0-87.9)	
Single parent	6.2 (4.9-7.7)	9.8 (8.2-11.6)	84.0 (81.7-86.0)	
Both parents	3.1 (2.5-3.7)	7.2 (6.3-8.1)	89.8 (88.7-90.8)	
<b>Type of school</b>				<b>N = 5 412</b>
ESC-classes sup.	5.1 (3.9-6.7)	13.2 (11.2-15.5)	81.7 (79.2-84.1)	$p < .001$ Cramér's V. = .105
ESG-classes sup.	4.8 (3.6-6.5)	9.7 (7.9-12.0)	85.4 (82.9-87.7)	
Formation prof.	6.0 (4.3-8.3)	12.5 (10.0-15.5)	81.5 (78.1-84.6)	
ESC-classes inf.	1.9 (1.2-2.8)	4.7 (3.6-6.1)	93.4 (91.8-94.8)	
ESG-classes inf. (VO)	3.0 (2.3-4.0)	5.6 (4.6-6.9)	91.3 (89.9-92.7)	
ESG-classes inf. (VP)	4.8 (3.2-7.0)	4.7 (3.0-6.7)	90.5 (87.8-92.9)	

Respondents aged 13-18 from secondary schools only were asked if their parents think that it is ok to use cannabis. The answer options ranged from "I strongly agree" (1) to "I strongly disagree" (5). Cannabis acceptability of parents was categorised in: cannabis is ok (categories 1-to-2), neutral (category 3) and cannabis is not ok (categories 4-to-5). The results are in % (95% Confidence Interval).

Figure 40: Cannabis acceptability according to sociodemographic groups



**Table 16: Cannabis acceptability according to sociodemographic groups**

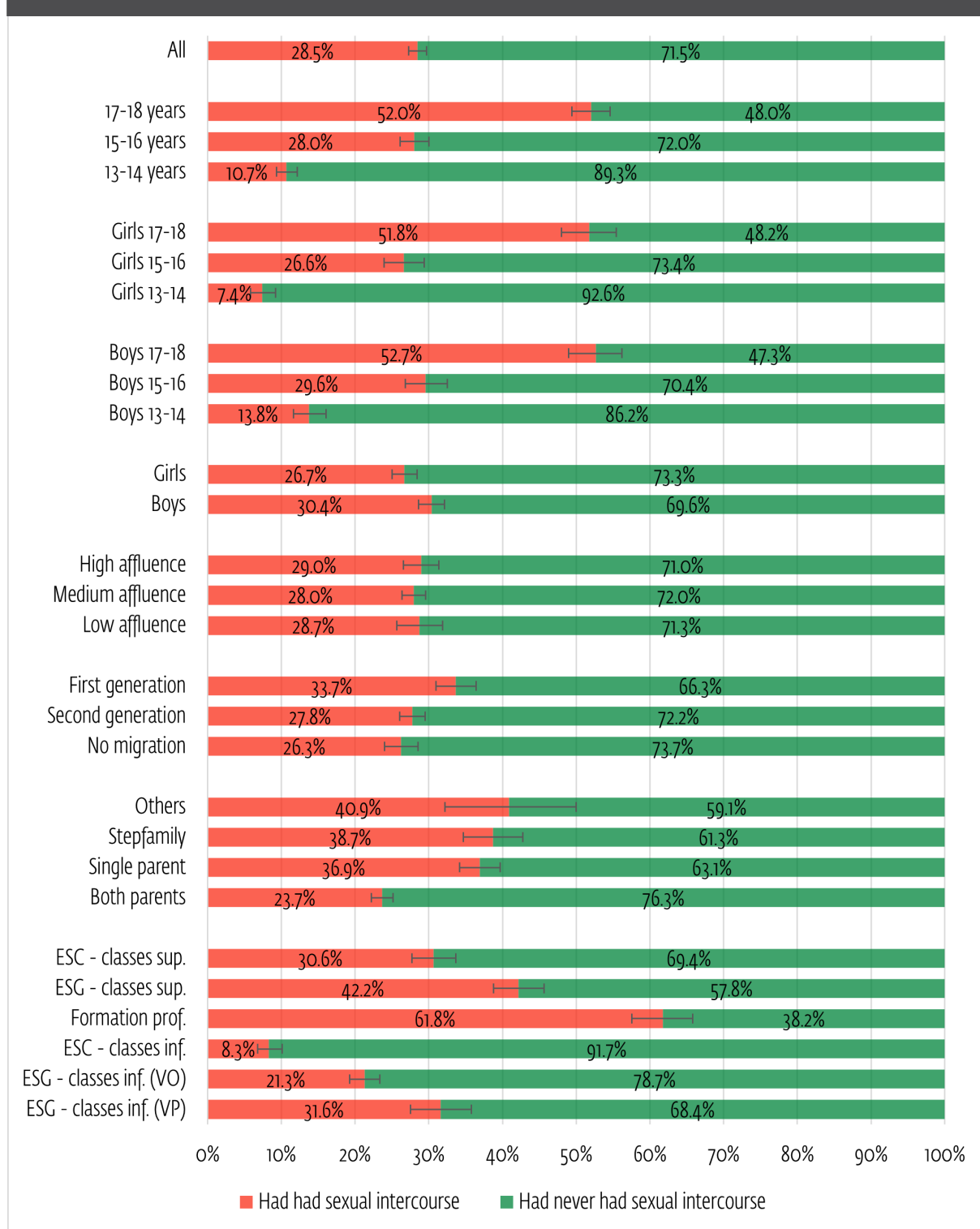
	<b>Cannabis is ok (1-2)</b>	<b>Neutral (3)</b>	<b>Cannabis is not ok (4-5)</b>	<b>Chi square test</b>
<b>All</b>				<b>N = 5 414</b>
	17.7 (16.7-18.7)	19.4 (18.4-20.5)	62.9 (61.6-64.2)	
<b>Age</b>				<b>N = 5 414</b>
13-14 years	6.7 (5.7-7.9)	11.0 (9.7-12.5)	82.2 (80.5-83.9)	$p < .001$ $\gamma = .464$
15-16 years	19.9 (18.2-21.7)	21.5 (19.7-23.3)	58.7 (56.5-60.8)	
17-18 years	28.6 (26.3-30.9)	27.4 (25.2-29.7)	44.1 (41.5-46.6)	
<b>Age x Gender</b>				<b>N = 2 645</b>
Girls 13-14	6.1 (4.7-7.8)	12.3 (10.3-14.6)	81.5 (78.9-84.0)	$p < .001$ $\gamma = .433$
Girls 15-16	18.2 (16.0-20.7)	22.3 (19.8-24.9)	59.5 (56.5-62.5)	
Girls 17-18	24.4 (21.4-27.7)	29.2 (26.0-32.7)	46.4 (42.7-50.0)	
				<b>N = 2 725</b>
Boys 13-14	7.3 (5.8-9.1)	9.3 (7.6-11.3)	83.4 (81.0-85.7)	$p < .001$ $\gamma = .496$
Boys 15-16	21.0 (18.6-23.6)	20.6 (18.2-23.1)	58.4 (55.3-61.3)	
Boys 17-18	32.0 (28.7-35.4)	25.9 (22.9-29.2)	42.1 (38.6-45.6)	
<b>Gender</b>				<b>N = 5 370</b>
Girls	15.7 (14.3-17.1)	20.7 (19.2-22.3)	63.6 (61.7-65.4)	$p < .001$ Cramér's V. = .052
Boys	19.2 (17.8-20.7)	18.1 (16.7-19.6)	62.7 (60.9-64.5)	
<b>Family affluence</b>				<b>N = 5 286</b>
High	19.2 (17.2-21.3)	19.4 (17.4-21.6)	61.3 (58.7-63.9)	$p = .040$ $\gamma = .047$
Medium	17.6 (16.3-19.0)	19.9 (18.5-21.3)	62.5 (60.8-64.2)	
Low	16.4 (14.0-19.0)	17.9 (15.5-20.6)	65.7 (62.4-68.8)	
<b>Migration background</b>				<b>N = 5 217</b>
First generation	15.9 (13.9-18.1)	18.4 (16.3-20.7)	65.7 (63.0-68.5)	$p = .007$ Cramér's V. = .037
Second generation	17.4 (16.0-18.9)	20.7 (19.1-22.2)	61.9 (60.0-63.7)	
No migration	20.4 (18.4-22.6)	18.5 (16.6-20.6)	61.0 (58.5-63.5)	
<b>Family structure</b>				<b>N = 5131</b>
Others	22.1 (15.2-30.4)	28.2 (20.6-37.1)	49.8 (40.4-58.7)	$p < .001$ Cramér's V. = .059
Stepfamily	20.9 (17.7-24.5)	19.7 (16.6-23.2)	59.4 (55.4-63.5)	
Single parent	20.8 (18.5-23.2)	22.0 (19.8-24.5)	57.2 (54.4-60.0)	
Both parents	16.2 (14.9-17.5)	18.7 (17.4-20.1)	65.1 (63.5-66.7)	
<b>Type of school</b>				<b>N = 5 414</b>
ESC-classes sup.	30.9 (28.0-33.9)	28.7 (25.8-31.6)	40.4 (37.3-43.6)	$p < .001$ Cramér's V. = .219
ESG-classes sup.	26.1 (23.1-29.1)	24.3 (21.5-27.4)	49.6 (46.2-53.1)	
Formation prof.	24.0 (20.6-27.7)	24.0 (20.6-27.7)	52.0 (47.8-56.2)	
ESC-classes inf.	10.2 (8.5-12.2)	13.4 (11.4-15.5)	76.4 (73.7-78.9)	
ESG-classes inf. (VO)	9.3 (7.9-10.8)	16.1 (14.3-18.0)	74.6 (72.4-76.7)	
ESG-classes inf. (VP)	13.9 (11.1-17.2)	12.4 (9.7-15.5)	73.7 (69.7-77.4)	

Respondents aged 13-18 from secondary schools only were asked if they think that it is ok to use cannabis. The answer options ranged from "I strongly agree" (1) to "I strongly disagree" (5). Cannabis acceptability was categorised in: cannabis is ok (categories 1-to-2), neutral (category 3) and cannabis is not ok (categories 4-to-5). The results are in % (95% Confidence Interval).



Sexual intercourse

Figure 41: Prevalence of adolescents having had sexual intercourse according to sociodemographic groups

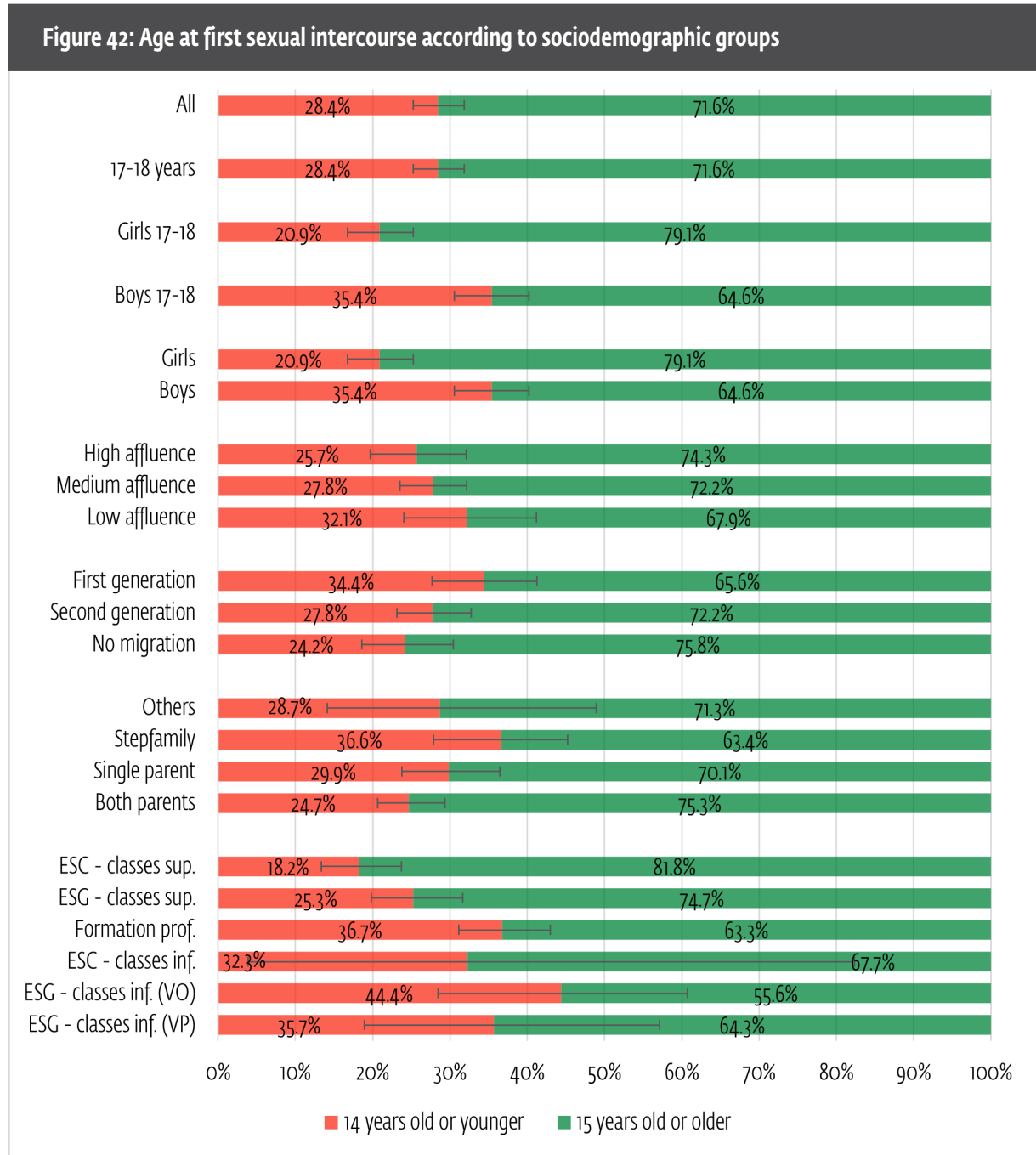


**Table 17: Prevalence of adolescents having had sexual intercourse according to sociodemographic groups**

	Yes (1)	No (2)	Chi square test
<b>All</b>			<b>N = 5 318</b>
	28.5 (27.3-29.7)	71.5 (70.3-72.7)	
<b>Age</b>			<b>N = 5 318</b>
13-14 years	10.7 (9.3-12.1)	89.3 (87.9-90.7)	$p < .001$
15-16 years	28.0 (26.1-30.0)	72.0 (70.0-73.9)	$\gamma = -.600$
17-18 years	52.0 (49.4-54.6)	48.0 (45.4-50.6)	
<b>Age x Gender</b>			<b>N = 2 612</b>
Girls 13-14	7.4 (5.8-9.3)	92.6 (90.7-94.2)	$p < .001$
Girls 15-16	26.6 (24.0-29.4)	73.4 (70.6-76.0)	$\gamma = -.660$
Girls 17-18	51.8 (48.0-55.4)	48.2 (44.4-51.8)	
<b>Gender</b>			<b>N = 2 661</b>
Boys 13-14	13.8 (11.7-16.1)	86.2 (83.9-88.3)	$p < .001$
Boys 15-16	29.6 (26.8-32.5)	70.4 (67.5-73.2)	$\gamma = -.551$
Boys 17-18	52.7 (49.0-56.2)	47.3 (43.7-50.9)	
<b>Gender</b>			<b>N = 5 273</b>
Girls	26.7 (25.0-28.4)	73.3 (71.6-75.0)	$p = .003$
Boys	30.4 (28.6-32.1)	69.6 (67.8-71.3)	Cramér's V. = .041
<b>Family affluence</b>			<b>N = 5 193</b>
High	29.0 (26.6-31.4)	71.0 (68.5-73.4)	$p = .768$
Medium	28.0 (26.4-29.6)	72.0 (70.4-73.6)	$\gamma = -.008$
Low	28.7 (25.7-31.9)	71.3 (68.1-74.3)	
<b>Migration background</b>			<b>N = 5 215</b>
First generation	33.7 (31.0-36.4)	66.3 (63.6-69.0)	$p < .001$
Second generation	27.8 (26.1-29.5)	72.2 (70.5-73.9)	Cramér's V. = .061
No migration	26.3 (24.0-28.6)	73.7 (71.4-76.0)	
<b>Family structure</b>			<b>N = 5 130</b>
Others	40.9 (32.2-50.0)	59.1 (50.0-67.8)	$p < .001$
Stepfamily	38.7 (34.7-42.8)	61.3 (57.2-65.3)	Cramér's V. = .149
Single parent	36.9 (34.2-39.7)	63.1 (60.3-65.8)	
Both parents	23.7 (22.3-25.2)	76.3 (74.8-77.7)	
<b>Type of school</b>			<b>N = 5 318</b>
ESC-classes sup.	30.6 (27.7-33.7)	69.4 (66.3-72.3)	$p < .001$
ESG-classes sup.	42.2 (38.8-45.6)	57.8 (54.4-61.2)	Cramér's V. = .340
Formation prof.	61.8 (57.5-65.8)	38.2 (34.2-42.5)	
ESC-classes inf.	8.3 (6.8-10.1)	91.7 (89.9-93.2)	
ESG-classes inf. (VO)	21.3 (19.3-23.4)	78.7 (76.6-80.7)	
ESG-classes inf. (VP)	31.6 (27.5-35.8)	68.4 (64.0-72.3)	

Respondents aged 13-18 from secondary schools only were asked if they already had sex. The answer options were "yes" (1) and "no" (5). Sexual intercourse was categorised in: had had sexual intercourse (category 1) and had never had sexual intercourse (category 2). The results are in % (95% Confidence Interval).

## Age at first sexual intercourse



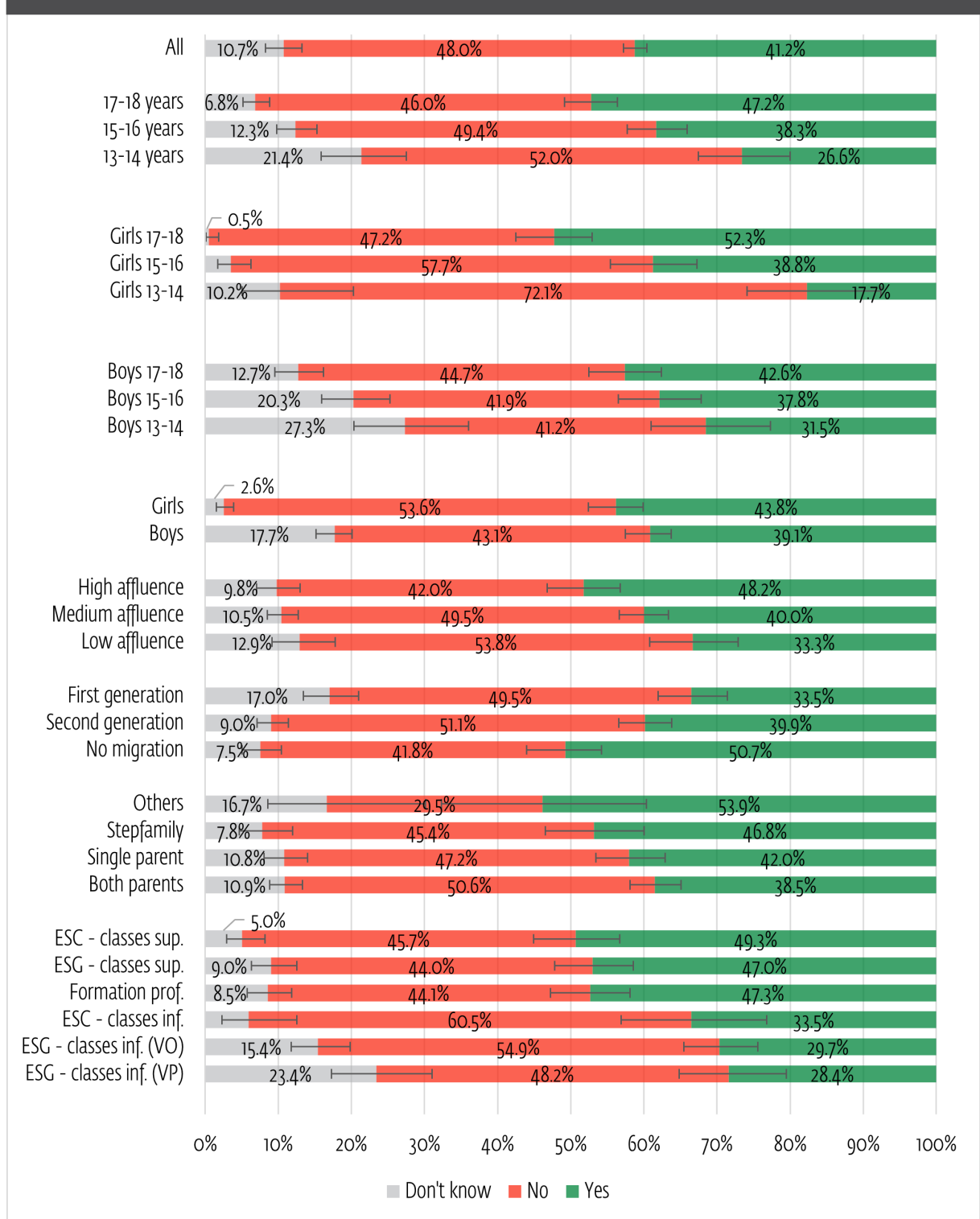
**Table 18: Age at first sexual intercourse according to sociodemographic groups**

	14 years old or younger	15 years old or older	Chi square test
<b>All</b>			<b>N = 727</b>
	28.4 (25.3-31.8)	71.6 (68.2-74.7)	
<b>Age</b>			<b>N = 727</b>
17-18 years	28.4 (25.3-31.8)	71.6 (68.2-74.7)	
<b>Age x Gender</b>			<b>N = 347</b>
Girls 17-18	20.9 (16.7-25.2)	79.1 (74.4-83.0)	
			<b>N = 377</b>
Boys 17-18	35.4 (30.6-40.2)	64.6 (59.5-69.2)	
<b>Gender</b>			<b>N = 723</b>
Girls	20.9 (16.7-25.2)	79.1 (74.4-83.0)	$p < .001$
Boys	35.4 (30.6-40.2)	64.6 (59.5-69.2)	Cramér's V. = .161
<b>Family affluence</b>			<b>N = 712</b>
High	25.7 (19.7-32.1)	74.3 (67.9-80.3)	
Medium	27.8 (23.5-32.1)	72.2 (67.6-76.3)	$p = .253$
Low	32.1 (24.0-41.2)	67.9 (58.8-76.0)	$\gamma = .086$
<b>Migration background</b>			<b>N = 722</b>
First generation	34.4 (27.7-41.2)	65.6 (58.8-72.3)	
Second generation	27.8 (23.2-32.7)	72.2 (67.3-76.8)	$p = .077$
No migration	24.2 (18.6-30.4)	75.8 (69.6-81.4)	Cramér's V. = .084
<b>Family structure</b>			<b>N = 712</b>
Others	28.7 (14.1-48.9)	71.3 (51.1-85.9)	
Stepfamily	36.6 (27.9-45.2)	63.4 (54.8-72.1)	$p = .086$
Single parent	29.9 (23.8-36.4)	70.1 (63.6-76.2)	Cramér's V. = .096
Both parents	24.7 (20.6-29.4)	75.3 (70.6-79.4)	
<b>Type of school</b>			<b>N = 727</b>
ESC-classes sup.	18.2 (13.3-23.7)	81.8 (76.3-86.7)	
ESG-classes sup.	25.3 (19.8-31.6)	74.7 (68.4-80.2)	
Formation prof.	36.7 (31.1-43.0)	63.3 (57.4-69.3)	$p < .001$
ESC-classes inf.	32.3 (3.9-82.3)	67.7 (17.7-96.1)	Cramér's V. = .186
ESG-classes inf. (VO)	44.4 (28.5-60.7)	55.6 (39.3-71.5)	
ESG-classes inf. (VP)	35.7 (18.9-57.1)	64.3 (42.9-81.1)	

Respondents aged 17-18 from secondary schools only that already had sex were asked how old they were at their first sexual intercourse. The answer options ranged from "11 years or younger" (1) to "16 years or older" (6). Age at first sexual intercourse was categorised based on the split of quartile (14 years old as the cut-off): 14 years old or younger and 15 years old or older. The results are in % (95% Confidence Interval).

Contraception

Figure 43: Contraception pill use according to sociodemographic groups

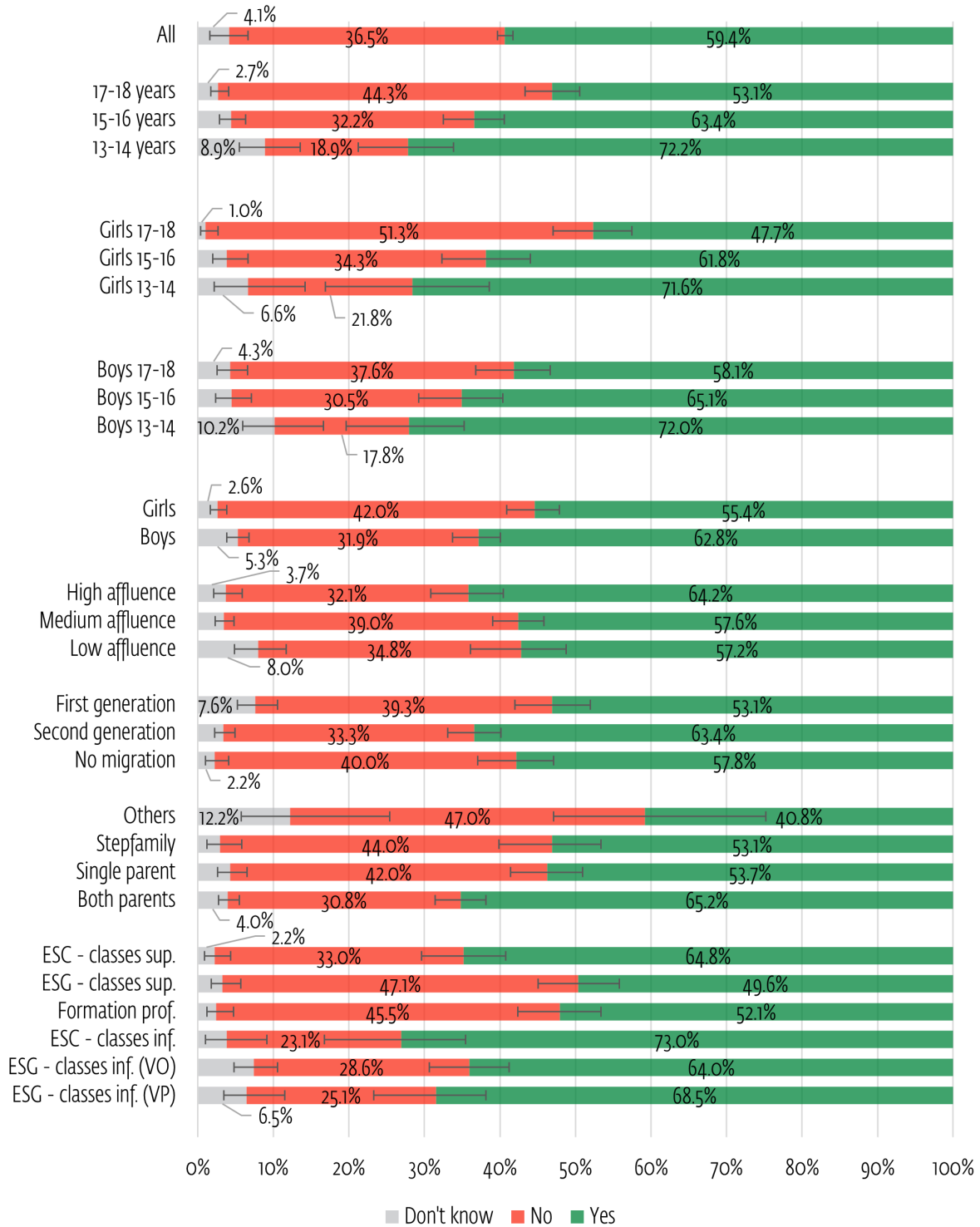


**Table 19: Contraception pill use according to sociodemographic groups**

	Don't know (3)	No (2)	Yes (1)	Chi square test
<b>All</b>				<b>N = 1 465</b>
	10.7 (9.2-12.4)	48.0 (45.4-50.5)	41.2 (38.7-43.8)	
<b>Age</b>				<b>N = 1 465</b>
13-14 years	21.4 (15.9-27.5)	52.0 (45.0-59.2)	26.6 (20.7-33.2)	$p < .001$
15-16 years	12.3 (9.8-15.3)	49.4 (45.2-53.6)	38.3 (34.3-42.4)	$\chi^2 = -.256$
17-18 years	6.8 (5.2-8.8)	46.0 (42.3-49.5)	47.2 (43.5-50.8)	
<b>Age x Gender</b>				<b>N = 672</b>
Girls 13-14	10.2 (5.0-20.3)	72.1 (60.1-81.7)	17.7 (9.5-27.8)	$p < .001$
Girls 15-16	3.5 (1.7-6.3)	57.7 (51.7-63.7)	38.8 (33.0-44.8)	$\chi^2 = -.383$
Girls 17-18	0.5 (0.1-1.8)	47.2 (42.0-52.4)	52.3 (47.1-57.5)	
<b>Gender</b>				<b>N = 785</b>
Boys 13-14	27.3 (20.3-36.0)	41.2 (33.0-50.3)	31.5 (24.0-40.3)	$p < .001$
Boys 15-16	20.3 (15.9-25.3)	41.9 (36.3-47.8)	37.8 (32.2-43.5)	$\chi^2 = -.174$
Boys 17-18	12.7 (9.6-16.2)	44.7 (39.7-49.6)	42.6 (37.6-47.5)	
<b>Gender</b>				<b>N = 1 457</b>
Girls	2.6 (1.5-3.9)	53.6 (49.9-57.5)	43.8 (40.0-47.5)	$p < .001$
Boys	17.7 (15.2-20.5)	43.1 (39.6-46.5)	39.1 (35.7-42.6)	Cramér's V. = .245
<b>Family affluence</b>				<b>N = 1 426</b>
High	9.8 (7.0-13.0)	42.0 (37.0-46.9)	48.2 (43.2-53.2)	$p < .001$
Medium	10.5 (8.5-12.7)	49.5 (46.1-53.0)	40.0 (36.6-43.4)	$\chi^2 = -.148$
Low	12.9 (9.1-17.8)	53.8 (47.2-60.0)	33.3 (27.5-39.6)	
<b>Migration background</b>				<b>N = 1 447</b>
First generation	17.0 (13.4-21.0)	49.5 (44.5-54.5)	33.5 (29.0-38.5)	$p < .001$
Second generation	9.0 (7.1-11.4)	51.1 (47.5-54.9)	39.9 (36.3-43.5)	Cramér's V. = .114
No migration	7.5 (5.1-10.5)	41.8 (36.8-46.9)	50.7 (45.4-55.7)	
<b>Family structure</b>				<b>N = 1 424</b>
Others	16.7 (8.6-30.2)	29.5 (18.6-44.6)	53.9 (40.1-68.1)	$p = .048$
Stepfamily	7.8 (4.7-12.0)	45.4 (38.7-52.2)	46.8 (40.1-53.7)	Cramér's V. = .067
Single parent	10.8 (8.1-14.0)	47.2 (42.4-51.9)	42.0 (37.4-46.9)	
Both parents	10.9 (8.8-13.3)	50.6 (47.1-54.2)	38.5 (35.1-42.1)	
<b>Type of school</b>				<b>N = 1 465</b>
ESC-classes sup.	5.0 (2.9-8.2)	45.7 (40.0-51.7)	49.3 (43.6-55.3)	$p < .001$
ESG-classes sup.	9.0 (6.3-12.5)	44.0 (38.8-49.5)	47.0 (41.8-52.5)	Cramér's V. = .160
Formation prof.	8.5 (5.7-11.8)	44.1 (38.9-49.7)	47.3 (41.9-52.8)	
ESC-classes inf.	6.0 (2.3-12.6)	60.5 (50.1-70.7)	33.5 (23.9-43.8)	
ESG-classes inf. (VO)	15.4 (11.8-19.8)	54.9 (49.3-60.3)	29.7 (24.8-34.9)	
ESG-classes inf. (VP)	23.4 (17.2-31.0)	48.2 (39.9-56.0)	28.4 (21.6-36.2)	

Respondents aged 13-18 from secondary schools only were asked if their partner or themselves use contraceptive pill. The answer options were "yes" (1), "no" (2) and "don't know" (3). Contraception pill use was categorised in: don't know (category 3), no (category 2) and yes (category 1). The results are in % (95% Confidence Interval).

Figure 44: Condom use according to sociodemographic groups



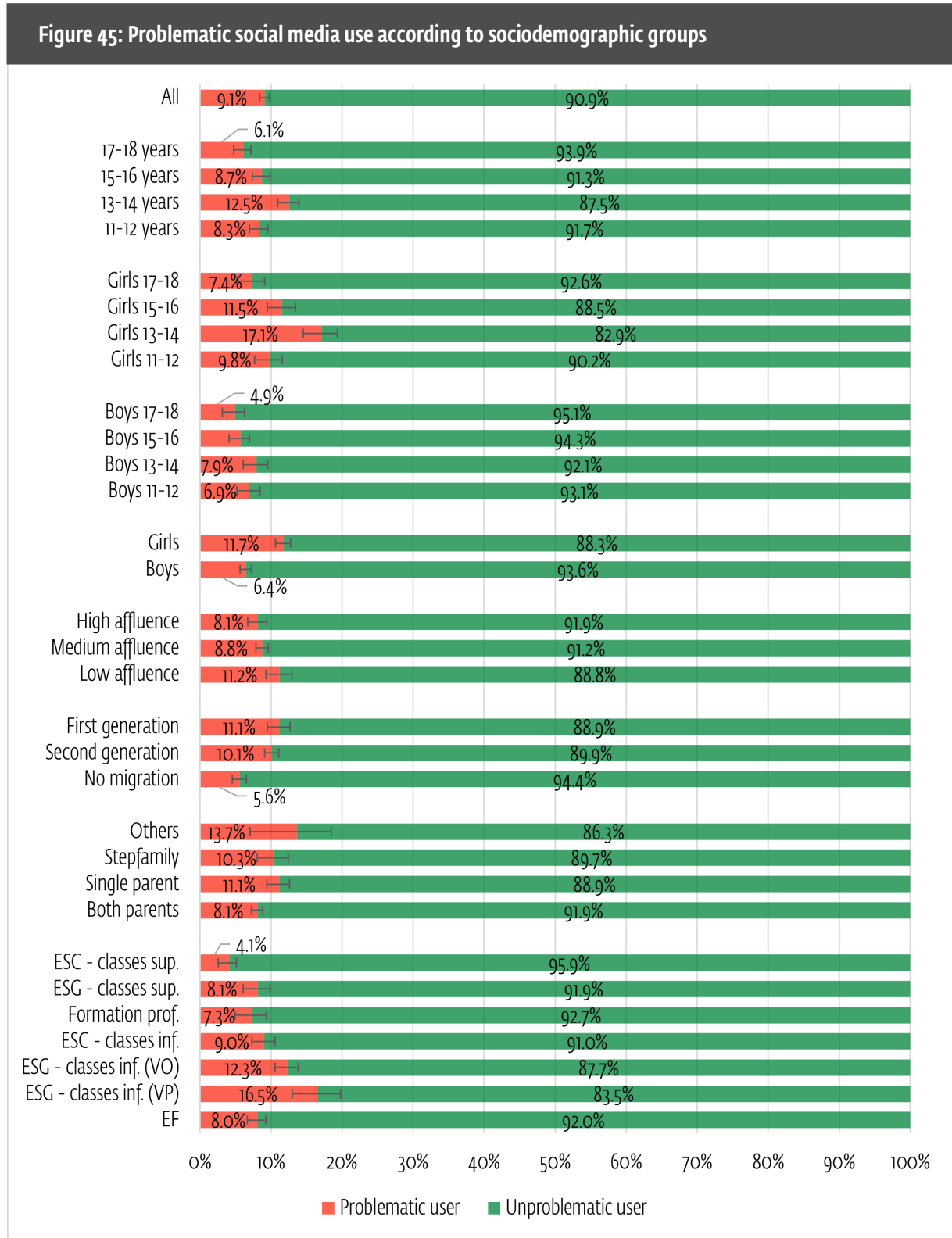
**Table 20: Condom use according to sociodemographic groups**

	Don't know (3)	No (2)	Yes (1)	Chi square test
<b>All</b>				<b>N = 1 475</b>
	4.1 (3.2-5.2)	36.5 (34.0-39.0)	59.4 (56.9-61.9)	
<b>Age</b>				<b>N = 1 475</b>
13-14 years	8.9 (5.5-13.6)	18.9 (13.8-24.8)	72.2 (65.6-78.2)	$p < .001$
15-16 years	4.4 (2.9-6.3)	32.2 (28.5-36.3)	63.4 (59.2-67.3)	$\gamma = .199$
17-18 years	2.7 (1.7-4.1)	44.3 (40.7-47.8)	53.1 (49.4-56.7)	
<b>Age x Gender</b>				<b>N = 680</b>
Girls 13-14	6.6 (2.1-14.2)	21.8 (13.1-33.1)	71.6 (60.1-81.7)	$p < .001$
Girls 15-16	3.8 (2.0-6.6)	34.3 (28.7-40.1)	61.8 (56.0-67.7)	$\gamma = .255$
Girls 17-18	1.0 (0.4-2.7)	51.3 (46.1-56.5)	47.7 (42.4-52.8)	
<b>Gender</b>				<b>N = 785</b>
Boys 13-14	10.2 (6.0-16.6)	17.8 (11.7-25.0)	72.0 (63.7-79.3)	$p = .017$
Boys 15-16	4.4 (2.4-7.1)	30.5 (25.4-36.2)	65.1 (59.4-70.5)	$\gamma = .145$
Boys 17-18	4.3 (2.5-6.6)	37.6 (33.0-42.7)	58.1 (53.0-62.9)	
<b>Gender</b>				<b>N = 1 465</b>
Girls	2.6 (1.6-4.1)	42.0 (38.2-45.6)	55.4 (51.7-59.1)	$p < .001$
Boys	5.3 (3.8-6.9)	31.9 (28.7-35.2)	62.8 (59.4-66.1)	Cramér's V. = .116
<b>Family affluence</b>				<b>N = 1 437</b>
High	3.7 (2.1-5.9)	32.1 (27.5-36.8)	64.2 (59.2-68.7)	$p = .026$
Medium	3.4 (2.3-4.8)	39.0 (35.7-42.3)	57.6 (54.2-61.0)	$\gamma = -.102$
Low	8.0 (4.8-11.7)	34.8 (29.0-41.2)	57.2 (50.5-63.2)	
<b>Migration background</b>				<b>N = 1 458</b>
First generation	7.6 (5.3-10.6)	39.3 (34.5-44.2)	53.1 (48.1-58.1)	$p < .001$
Second generation	3.4 (2.2-4.9)	33.3 (29.8-36.7)	63.4 (59.8-66.9)	Cramér's V. = .091
No migration	2.2 (1.0-4.1)	40.0 (35.1-45.1)	57.8 (52.7-62.8)	
<b>Family structure</b>				<b>N = 1 433</b>
Others	12.2 (5.8-25.4)	47.0 (32.7-61.1)	40.8 (28.6-56.8)	$p < .001$
Stepfamily	2.9 (1.2-5.8)	44.0 (37.1-50.5)	53.1 (46.1-59.6)	Cramér's V. = .108
Single parent	4.3 (2.6-6.5)	42.0 (37.4-46.8)	53.7 (48.9-58.4)	
Both parents	4.0 (2.7-5.5)	30.8 (27.6-34.2)	65.2 (61.8-68.5)	
<b>Type of school</b>				<b>N = 1 475</b>
ESC-classes sup.	2.2 (0.9-4.4)	33.0 (27.6-38.5)	64.8 (59.3-70.4)	$p < .001$
ESG-classes sup.	3.3 (1.8-5.7)	47.1 (41.9-52.7)	49.6 (44.3-55.1)	Cramér's V. = .147
Formation prof.	2.4 (1.2-4.7)	45.5 (40.0-50.9)	52.1 (46.5-57.5)	
ESC-classes inf.	3.8 (1.0-9.1)	23.1 (15.5-33.3)	73.0 (62.8-81.5)	
ESG-classes inf. (VO)	7.4 (4.8-10.6)	28.6 (23.8-33.7)	64.0 (58.7-69.3)	
ESG-classes inf. (VP)	6.5 (3.5-11.5)	25.1 (18.3-32.0)	68.5 (60.2-75.1)	

Respondents aged 13-18 from secondary schools only were asked if their partner or themselves use condom. The answer options were "yes" (1), "no" (2) and "don't know" (3). Condom use was categorised in: don't know (category 3), no (category 2) and yes (category 1). The results are in % (95% Confidence Interval).



Problematic social media use



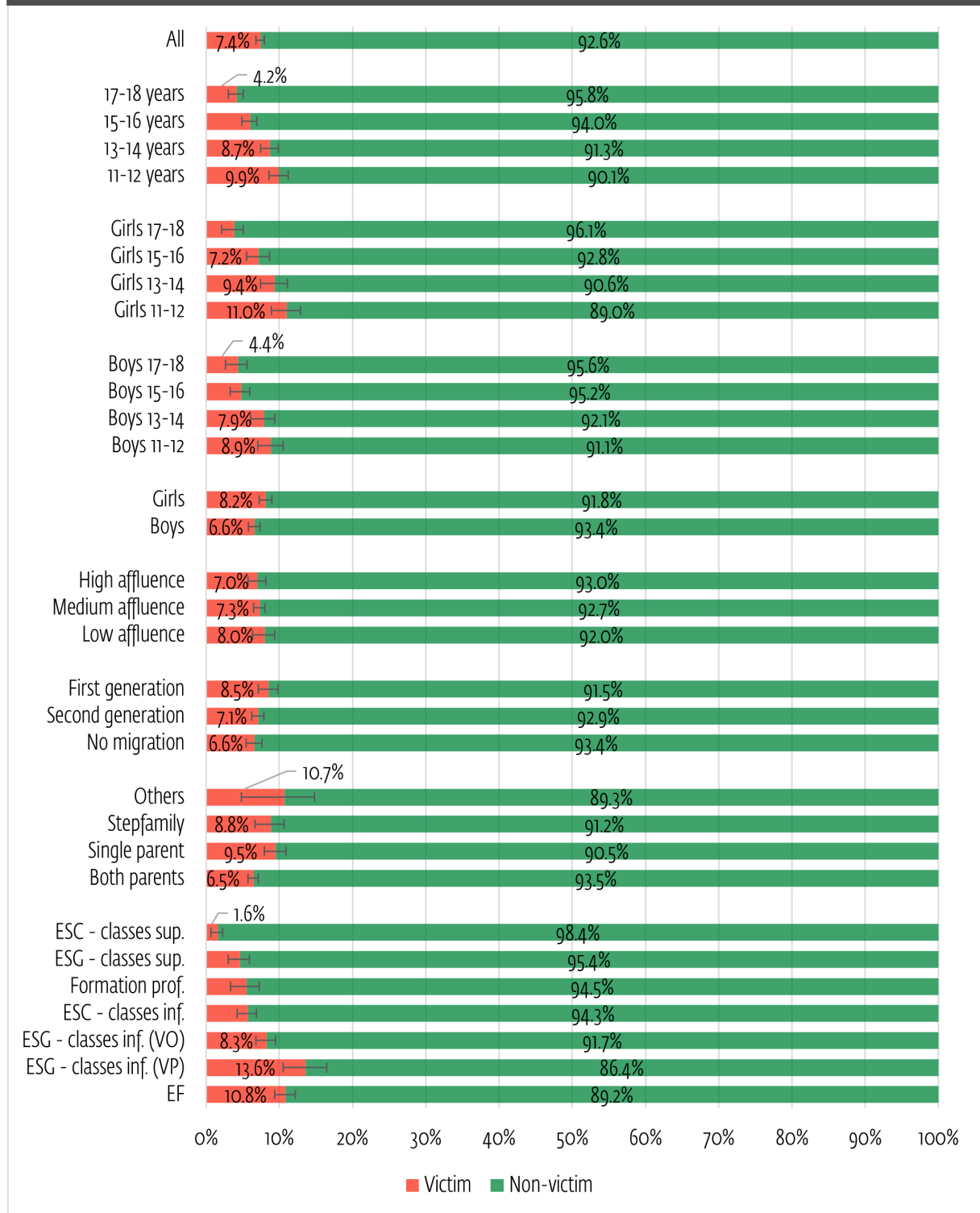
**Table 21: Problematic social media use according to sociodemographic groups**

	Problematic user (6-9)	Unproblematic user (1-5)	Chi square test
<b>All</b>			<b>N = 7 130</b>
	9.1 (8.5-9.8)	90.9 (90.2-91.5)	
<b>Age</b>			<b>N = 7 130</b>
11-12 years	8.3 (7.1-9.7)	91.7 (90.3-92.9)	
13-14 years	12.5 (11.1-14.1)	87.5 (85.9-88.9)	$p < .001$
15-16 years	8.7 (7.5-10.0)	91.3 (90.0-92.5)	$\gamma = -.097$
17-18 years	6.1 (4.9-7.4)	93.9 (92.6-95.1)	
<b>Age x Gender</b>			<b>N = 3 528</b>
Girls 11-12	9.8 (7.9-11.8)	90.2 (88.2-92.1)	
Girls 13-14	17.1 (14.8-19.6)	82.9 (80.4-85.2)	$p = .013$
Girls 15-16	11.5 (9.7-13.6)	88.5 (86.5-90.4)	$\gamma = -.088$
Girls 17-18	7.4 (5.6-9.5)	92.6 (90.5-94.4)	
			<b>N = 3 553</b>
Boys 11-12	6.9 (5.4-8.7)	93.1 (91.4-94.7)	
Boys 13-14	7.9 (6.3-9.8)	92.1 (90.2-93.7)	$p = .027$
Boys 15-16	5.7 (4.4-7.3)	94.3 (92.7-95.6)	$\gamma = -.110$
Boys 17-18	4.9 (3.5-6.6)	95.1 (93.4-96.5)	
<b>Gender</b>			<b>N = 7 082</b>
Girls	11.7 (10.7-12.8)	88.3 (87.2-89.3)	$p < .001$
Boys	6.4 (5.7-7.3)	93.6 (92.7-94.4)	Cramér's V. = .092
<b>Family affluence</b>			<b>N = 6 957</b>
High	8.1 (6.9-9.5)	91.9 (90.5-93.1)	$p = .010$
Medium	8.8 (8.0-9.7)	91.2 (90.3-92.0)	$\gamma = -.098$
Low	11.2 (9.5-13.1)	88.8 (86.9-90.5)	
<b>Migration background</b>			<b>N = 7 021</b>
First generation	11.1 (9.6-12.8)	88.9 (87.2-90.4)	$p < .001$
Second generation	10.1 (9.2-11.2)	89.9 (88.8-90.8)	Cramér's V. = .078
No migration	5.6 (4.6-6.6)	94.4 (93.4-95.4)	
<b>Family structure</b>			<b>N = 6 912</b>
Others	13.7 (8.8-20.2)	86.3 (79.8-91.2)	
Stepfamily	10.3 (8.3-12.7)	89.7 (87.5-91.8)	$p < .001$
Single parent	11.1 (9.6-12.8)	88.9 (87.2-90.4)	Cramér's V. = .051
Both parents	8.1 (7.3-8.9)	91.9 (91.1-92.7)	
<b>Type of school</b>			<b>N = 7 130</b>
ESC-classes sup.	4.1 (2.9-5.5)	95.9 (94.4-97.0)	
ESG-classes sup.	8.1 (6.4-10.2)	91.9 (89.8-93.6)	
Formation prof.	7.3 (5.3-9.7)	92.7 (90.3-94.7)	
ESC-classes inf.	9.0 (7.5-10.8)	91.0 (89.2-92.5)	$p < .001$
ESG-classes inf. (VO)	12.3 (10.7-14.0)	87.7 (86.0-89.3)	Cramér's V. = .108
ESG-classes inf. (VP)	16.5 (13.4-20.2)	83.5 (80.0-86.8)	
EF	8.0 (6.8-9.4)	92.0 (90.6-93.2)	

Respondents were asked about their experiences with social media. The scale comprises 9 items and the answer options were "no" (0) and "yes" (1). Problematic social media use was categorised in: problematic use (sum score of the scale is 6-to-9) and unproblematic user (sum score of the scale is 0-to-5). The results are in % (95% Confidence Interval).

## Bullying victimisation

Figure 46: Bullying victimisation in school according to sociodemographic groups

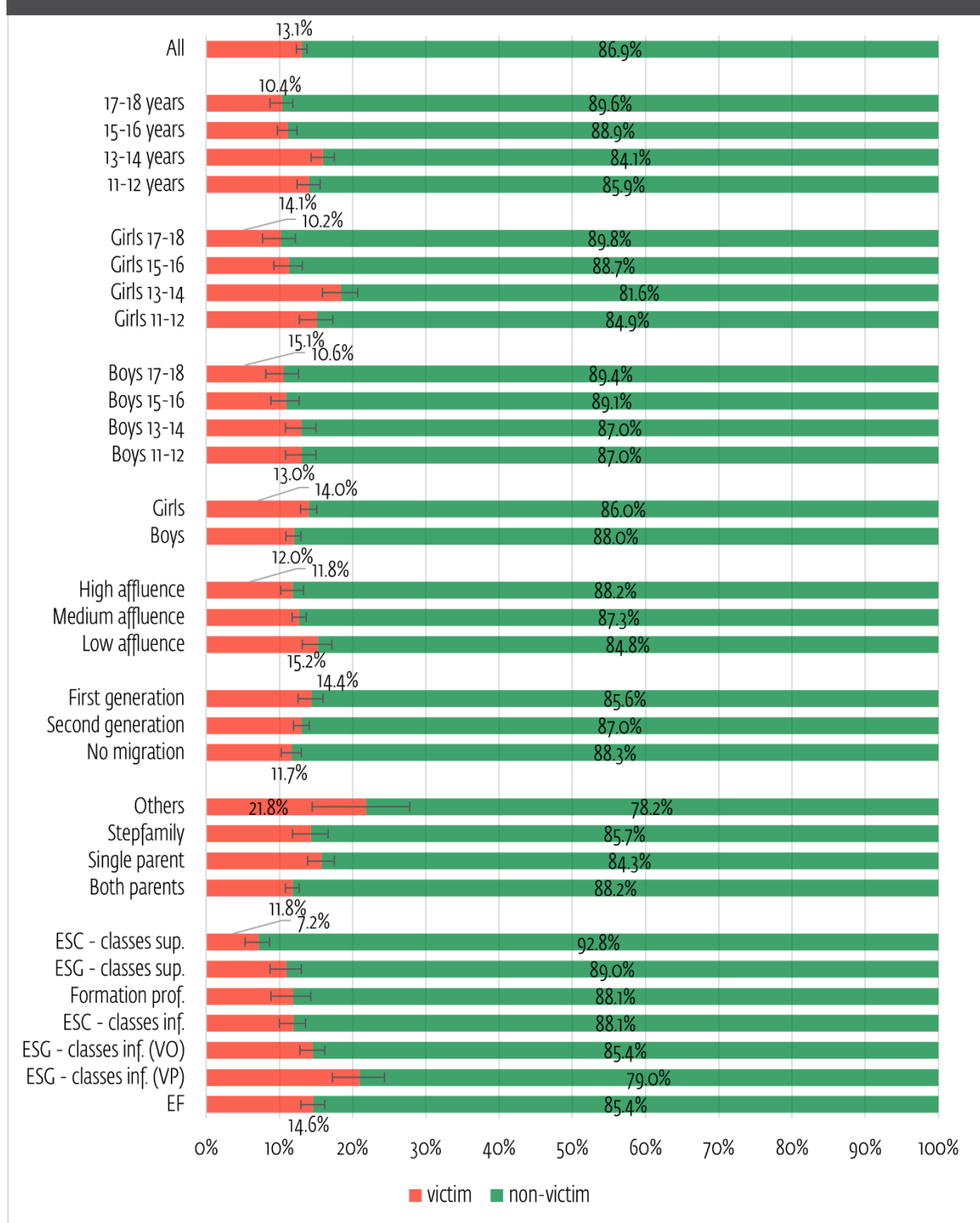


**Table 22: Bullying victimisation in school according to sociodemographic groups**

	Victim (3-5)	Non-victim (1-2)	Chi square test
<b>All</b>			<b>N = 7 518</b>
	7.4 (6.8-8.0)	92.6 (92.0-93.2)	
<b>Age</b>			<b>N = 7 518</b>
11-12 years	9.9 (8.7-11.4)	90.1 (88.7-91.3)	
13-14 years	8.7 (7.6-10.0)	91.3 (90.0-92.4)	$p < .001$
15-16 years	6.0 (5.1-7.1)	94.0 (92.9-94.9)	$\gamma = -.236$
17-18 years	4.2 (3.2-5.3)	95.8 (94.7-96.8)	
<b>Age x Gender</b>			<b>N = 3 675</b>
Girls 11-12	11.0 (9.1-13.1)	89.0 (86.9-90.9)	
Girls 13-14	9.4 (7.7-11.3)	90.6 (88.7-92.3)	$p < .001$
Girls 15-16	7.2 (5.7-8.9)	92.8 (91.1-94.3)	$\gamma = -.247$
Girls 17-18	3.9 (2.6-5.5)	96.1 (94.4-97.3)	
			<b>N = 3 792</b>
Boys 11-12	8.9 (7.3-10.8)	91.1 (89.3-92.8)	
Boys 13-14	7.9 (6.4-9.7)	92.1 (90.3-93.6)	$p < .001$
Boys 15-16	4.8 (3.6-6.3)	95.2 (93.7-96.4)	$\gamma = -.223$
Boys 17-18	4.4 (3.1-6.1)	95.6 (93.9-96.9)	
<b>Gender</b>			<b>N = 7 468</b>
Girls	8.2 (7.3-9.1)	91.8 (90.9-92.7)	$p = .012$
Boys	6.6 (5.9-7.4)	93.4 (92.6-94.1)	Cramér's V. = .029
<b>Family affluence</b>			<b>N = 7 320</b>
High	7.0 (5.8-8.3)	93.0 (91.7-94.2)	$p = .314$
Medium	7.3 (6.6-8.1)	92.7 (91.9-93.4)	$\gamma = -.041$
Low	8.0 (6.6-9.6)	92.0 (90.4-93.4)	
<b>Migration background</b>			<b>N = 7 336</b>
First generation	8.5 (7.2-10.0)	91.5 (90.0-92.8)	$p = .074$
Second generation	7.1 (6.3-8.0)	92.9 (92.0-93.6)	Cramér's V. = .027
No migration	6.6 (5.6-7.7)	93.4 (92.3-94.4)	
<b>Family structure</b>			<b>N = 7 195</b>
Others	10.7 (6.6-16.6)	89.3 (83.4-93.4)	
Stepfamily	8.8 (7.0-11.0)	91.2 (89.0-93.0)	$p < .001$
Single parent	9.5 (8.1-11.0)	90.5 (89.1-92.0)	Cramér's V. = .053
Both parents	6.5 (5.8-7.2)	93.5 (92.8-94.2)	
<b>Type of school</b>			<b>N = 7 518</b>
ESC-classes sup.	1.6 (0.9-2.5)	98.4 (97.5-99.1)	
ESG-classes sup.	4.6 (3.4-6.2)	95.4 (93.8-96.6)	
Formation prof.	5.5 (3.9-7.7)	94.5 (92.3-96.1)	
ESC-classes inf.	5.7 (4.5-7.1)	94.3 (92.8-95.4)	$p < .001$
ESG-classes inf. (VO)	8.3 (7.0-9.7)	91.7 (90.3-92.9)	Cramér's V. = .129
ESG-classes inf. (VP)	13.6 (10.9-16.8)	86.4 (83.4-89.3)	
EF	10.8 (9.5-12.3)	89.2 (87.7-90.5)	

Respondents were asked how often they have been bullied in school in the past couple of months. The answer options ranged from "I have not been bullied at school in the past couple of months" (1) to "several times a week" (5). Bullying victimisation was categorised in: victim (categories 3-to-5) and non-victim (categories 1-to-2). The results are in % (95% Confidence Interval).

Figure 47: Cyberbullying victimisation according to sociodemographic groups

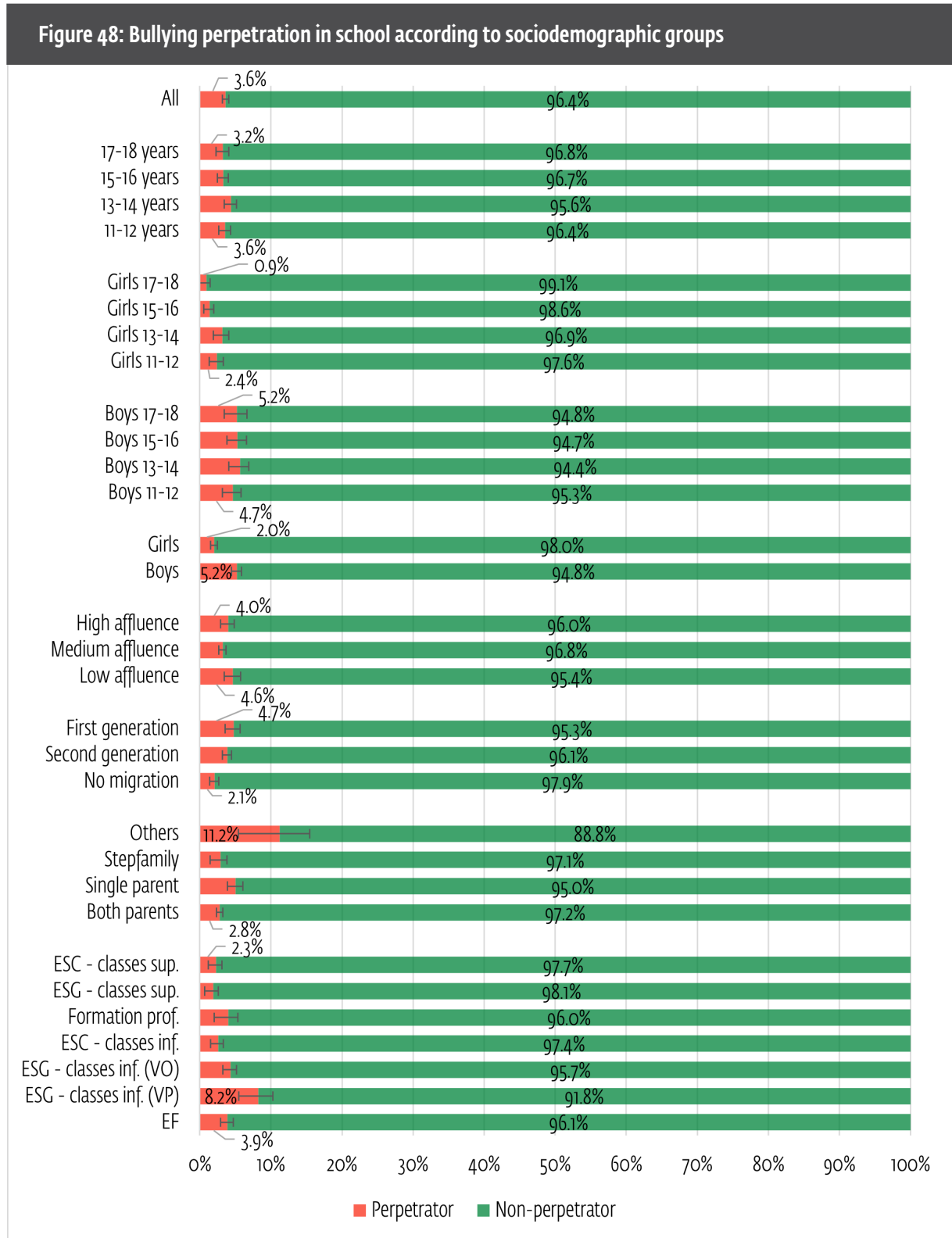


**Table 23: Cyberbullying victimisation according to sociodemographic groups**

	Victim (2-5)	Non-victim (1)	Chi square test
<b>All</b>			<b>N = 7 490</b>
	13.1 (12.3-13.8)	86.9 (86.2-87.7)	
<b>Age</b>			<b>N = 7 490</b>
11-12 years	14.1 (12.6-15.7)	85.9 (84.3-87.4)	
13-14 years	15.9 (14.4-17.6)	84.1 (82.4-85.6)	$p < .001$
15-16 years	11.1 (9.8-12.6)	88.9 (87.5-90.2)	$\gamma = -.113$
17-18 years	10.4 (8.9-12.0)	89.6 (88.0-91.1)	
<b>Age x Gender</b>			<b>N = 3 669</b>
Girls 11-12	15.1 (13.0-17.6)	84.9 (82.4-87.0)	
Girls 13-14	18.4 (16-20.8)	81.6 (79.2-84.0)	$p < .001$
Girls 15-16	11.3 (9.5-13.4)	88.7 (86.6-90.5)	$\gamma = -.146$
Girls 17-18	10.2 (8.1-12.6)	89.8 (87.3-91.8)	
<b>Boys</b>			<b>N = 3 769</b>
Boys 11-12	13.0 (11.0-15.1)	87.0 (84.9-89.0)	
Boys 13-14	13.0 (11.1-15.2)	87.0 (84.8-88.9)	$p = .051$
Boys 15-16	10.9 (9.0-12.9)	89.1 (87.1-91.0)	$\gamma = -.073$
Boys 17-18	10.6 (8.6-13.0)	89.4 (87.0-91.4)	
<b>Gender</b>			<b>N = 7 439</b>
Girls	14.0 (12.9-15.2)	86.0 (84.9-87.1)	$p = .009$
Boys	12.0 (11.0-13.0)	88.0 (87.0-89.0)	Cramér's V. = .030
<b>Family affluence</b>			<b>N = 7 292</b>
High	11.8 (10.3-13.4)	88.2 (86.6-89.7)	$p = .010$
Medium	12.7 (11.8-13.7)	87.3 (86.3-88.2)	$\gamma = -.082$
Low	15.2 (13.3-17.3)	84.8 (82.7-86.7)	
<b>Migration background</b>			<b>N = 7 315</b>
First generation	14.4 (12.7-16.1)	85.6 (83.8-87.2)	$p = .051$
Second generation	13.0 (12.0-14.1)	87.0 (85.9-88.0)	Cramér's V. = .029
No migration	11.7 (10.3-13.1)	88.3 (86.9-89.7)	
<b>Family structure</b>			<b>N = 7 172</b>
Others	21.8 (15.8-29.1)	78.2 (70.9-84.2)	
Stepfamily	14.3 (12.0-16.9)	85.7 (83.2-88.1)	$p < .001$
Single parent	15.7 (14.0-17.6)	84.3 (82.4-86.0)	Cramér's V. = .062
Both parents	11.8 (10.9-12.8)	88.2 (87.2-89.1)	
<b>Type of school</b>			<b>N = 7 490</b>
ESC-classes sup.	7.2 (5.7-9.0)	92.8 (91.0-94.3)	
ESG-classes sup.	11.0 (8.9-13.2)	89.0 (86.8-91.1)	
Formation prof.	11.9 (9.3-14.7)	88.1 (85.1-90.6)	
ESC-classes inf.	11.9 (10.2-13.8)	88.1 (86.2-89.8)	$p < .001$
ESG-classes inf. (VO)	14.6 (12.9-16.3)	85.4 (83.7-87.1)	Cramér's V. = .096
ESG-classes inf. (VP)	21.0 (17.6-24.7)	79.0 (75.3-82.4)	
EF	14.6 (13.1-16.3)	85.4 (83.7-86.9)	

Respondents were asked how often they have been cyberbullied in the past couple of months. The answer options ranged from "I have not been cyberbullied in the past couple of months" (1) to "several times a week" (5). Cyberbullying victimisation was categorised in: victim (categories 2-to-5) and non-victim (category 1). The results are in % (95% Confidence Interval).

## Bullying perpetration



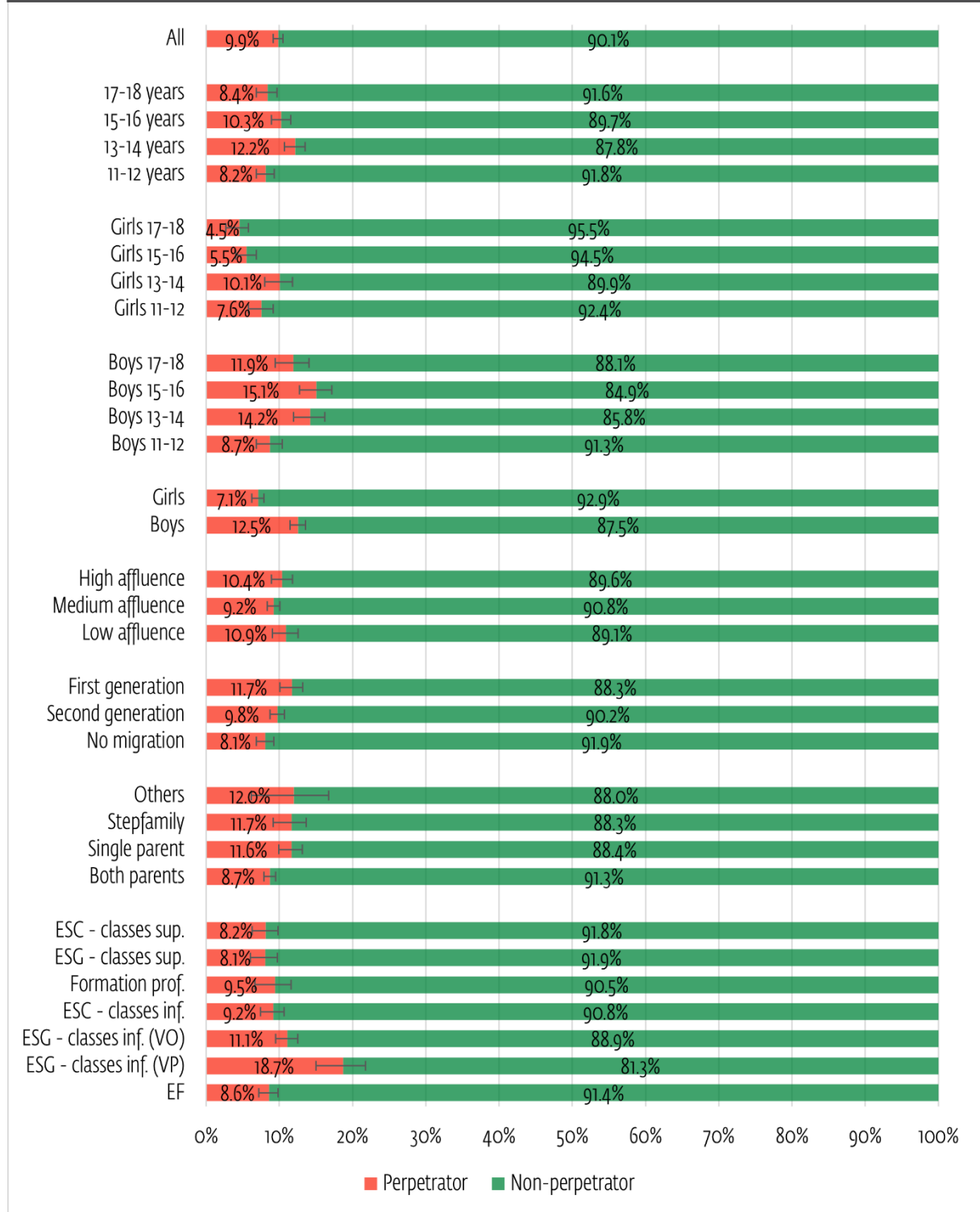
**Table 24: Bullying perpetration in school according to sociodemographic groups**

	Perpetrator (3-5)	Non-perpetrator (1-2)	Chi square test
<b>All</b>			<b>N = 7 538</b>
	3.6 (3.2-4.1)	96.4 (95.9-96.8)	
<b>Age</b>			<b>N = 7 538</b>
11-12 years	3.6 (2.8-4.4)	96.4 (95.6-97.2)	
13-14 years	4.4 (3.5-5.3)	95.6 (94.7-96.5)	$p = .293$
15-16 years	3.3 (2.6-4.1)	96.7 (95.9-97.5)	$\gamma = -.047$
17-18 years	3.2 (2.4-4.3)	96.8 (95.8-97.6)	
<b>Age x Gender</b>			<b>N = 3 693</b>
Girls 11-12	2.4 (1.6-3.5)	97.6 (96.5-98.4)	
Girls 13-14	3.1 (2.2-4.3)	96.9 (95.7-97.8)	$p = .002$
Girls 15-16	1.4 (0.8-2.2)	98.6 (97.8-99.2)	$\gamma = -.249$
Girls 17-18	0.9 (0.4-1.9)	99.1 (98.1-99.6)	
			<b>N = 3 793</b>
Boys 11-12	4.7 (3.5-6.1)	95.3 (93.9-96.5)	
Boys 13-14	5.6 (4.4-7.2)	94.4 (92.8-95.6)	$p = .643$
Boys 15-16	5.3 (4.0-6.7)	94.7 (93.3-96.0)	$\gamma = .025$
Boys 17-18	5.2 (3.8-7.0)	94.8 (93.0-96.2)	
<b>Gender</b>			<b>N = 7 486</b>
Girls	2.0 (1.6-2.5)	98.0 (97.4-98.4)	$p < .001$
Boys	5.2 (4.5-5.9)	94.8 (94.1-95.5)	Cramér's V. = .084
<b>Family affluence</b>			<b>N = 7 329</b>
High	4.0 (3.1-5.0)	96.0 (95.0-96.8)	$p = .606$
Medium	3.2 (2.7-3.8)	96.8 (96.3-97.3)	$\gamma = -.030$
Low	4.6 (3.5-5.9)	95.4 (94.1-96.5)	
<b>Migration background</b>			<b>N = 7 353</b>
First generation	4.7 (3.8-5.8)	95.3 (94.1-96.2)	$p < .001$
Second generation	3.9 (3.3-4.5)	96.1 (95.5-96.7)	Cramér's V. = .053
No migration	2.1 (1.5-2.8)	97.9 (97.2-98.5)	
<b>Family structure</b>			<b>N = 7 216</b>
Others	11.2 (7.0-17)	88.8 (83.0-93.0)	
Stepfamily	2.9 (1.9-4.3)	97.1 (95.7-98.1)	$p < .001$
Single parent	5.0 (4.0-6.2)	95.0 (93.8-96.0)	Cramér's V. = .079
Both parents	2.8 (2.4-3.3)	97.2 (96.7-97.6)	
<b>Type of school</b>			<b>N = 7 538</b>
ESC-classes sup.	2.3 (1.4-3.3)	97.7 (96.7-98.6)	
ESG-classes sup.	1.9 (1.1-2.9)	98.1 (96.9-98.8)	
Formation prof.	4.0 (2.6-5.9)	96.0 (94.1-97.4)	
ESC-classes inf.	2.6 (1.8-3.6)	97.4 (96.4-98.2)	$p < .001$
ESG-classes inf. (VO)	4.3 (3.4-5.3)	95.7 (94.6-96.6)	Cramér's V. = .081
ESG-classes inf. (VP)	8.2 (6.0-10.8)	91.8 (89.0-93.8)	
EF	3.9 (3.0-4.8)	96.1 (95.2-97.0)	

Respondents were asked how often they have taken part in bullying others in school in the past couple of months. The answer options ranged from "1 have not bullied another person at school in the past couple of months" (1) to "several times a week" (5). Bullying perpetration was categorised in: perpetrator (categories 3-to-5) and non-perpetrator (categories 1-to-2). The results are in % (95% Confidence Interval).



Figure 49: Cyberbullying perpetration according to sociodemographic groups



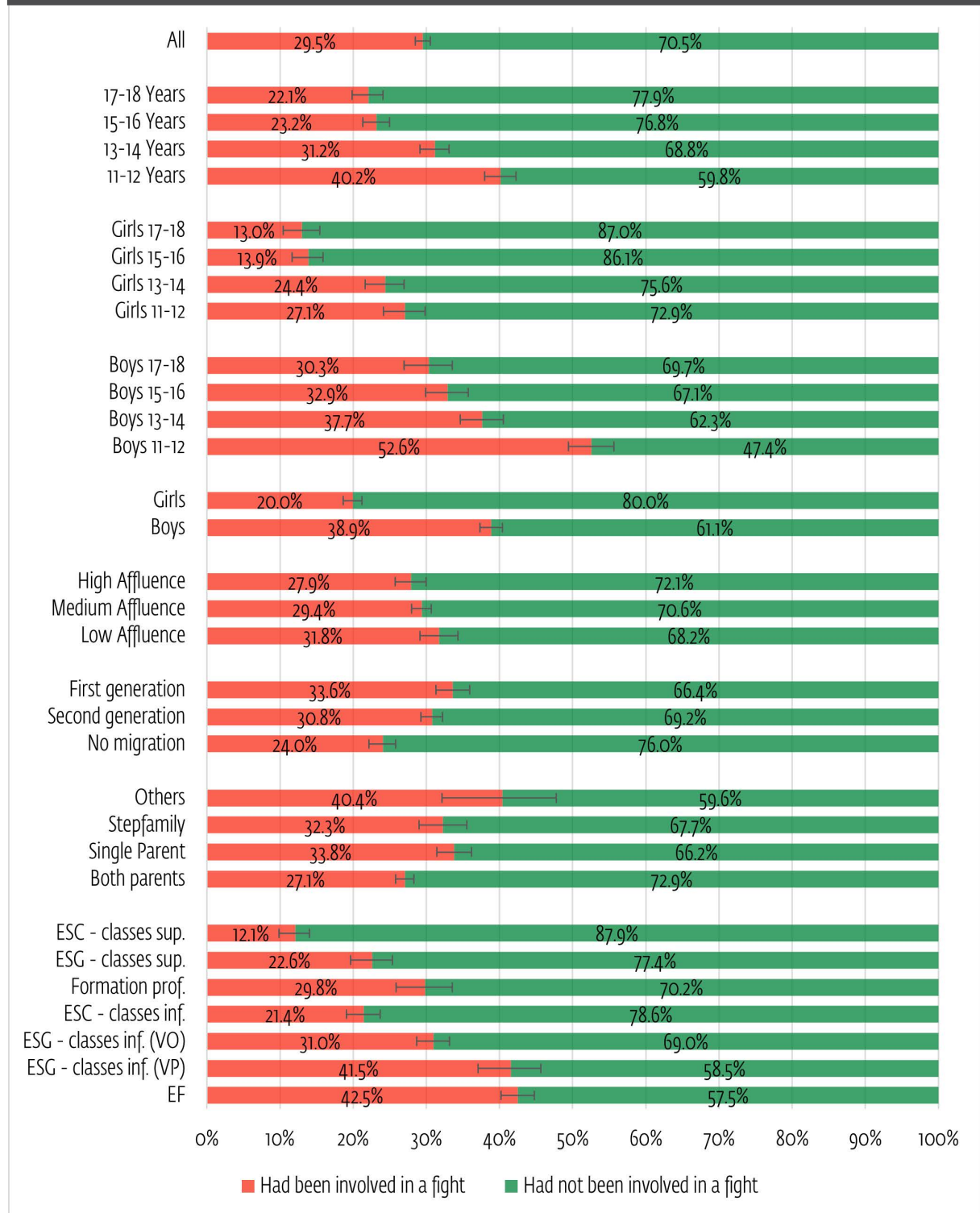
**Table 25: Cyberbullying perpetration according to sociodemographic groups**

	Perpetrator (2-5)	Non-perpetrator (1)	Chi square test
<b>All</b>			<b>N = 7 497</b>
	9.9 (9.2-10.6)	90.1 (89.4-90.8)	
<b>Age</b>			<b>N = 7 497</b>
11-12 years	8.2 (7.0-9.4)	91.8 (90.6-93.0)	
13-14 years	12.2 (10.8-13.6)	87.8 (86.4-89.2)	$p = .991$
15-16 years	10.3 (9-11.6)	89.7 (88.4-91.0)	$\gamma = .000$
17-18 years	8.4 (7.1-9.9)	91.6 (90.1-92.9)	
<b>Age x Gender</b>			<b>N = 3 682</b>
Girls 11-12	7.6 (6.0-9.4)	92.4 (90.6-94.0)	
Girls 13-14	10.1 (8.3-12.0)	89.9 (87.9-91.6)	$p < .001$
Girls 15-16	5.5 (4.3-7.1)	94.5 (93.0-95.8)	$\gamma = -.086$
Girls 17-18	4.5 (3.2-6.2)	95.5 (93.6-96.7)	
<b>Gender</b>			<b>N = 3 763</b>
Boys 11-12	8.7 (7.1-10.6)	91.3 (89.4-92.9)	
Boys 13-14	14.2 (12.2-16.5)	85.8 (83.5-87.8)	$p = .007$
Boys 15-16	15.1 (12.9-17.4)	84.9 (82.6-87.1)	$\gamma = .094$
Boys 17-18	11.9 (9.7-14.4)	88.1 (85.6-90.3)	
<b>Gender</b>			<b>N = 7 446</b>
Girls	7.1 (6.3-8.0)	92.9 (92.0-93.7)	$p < .001$
Boys	12.5 (11.5-13.6)	87.5 (86.4-88.5)	Cramér's V. = .091
<b>Family affluence</b>			<b>N = 7 296</b>
High	10.4 (9.0-11.9)	89.6 (88.1-91.0)	$p = .883$
Medium	9.2 (8.4-10.1)	90.8 (89.9-91.6)	$\gamma = -.005$
Low	10.9 (9.3-12.8)	89.1 (87.2-90.7)	
<b>Migration background</b>			<b>N = 7 317</b>
First generation	11.7 (10.2-13.3)	88.3 (86.6-89.7)	$p = .001$
Second generation	9.8 (8.8-10.8)	90.2 (89.2-91.2)	Cramér's V. = .043
No migration	8.1 (7.0-9.4)	91.9 (90.7-93.1)	
<b>Family structure</b>			<b>N = 7 175</b>
Others	12.0 (7.3-17.8)	88.0 (82.2-92.7)	
Stepfamily	11.7 (9.5-14.0)	88.3 (85.8-90.4)	$p = .001$
Single parent	11.6 (10.1-13.3)	88.4 (86.7-89.9)	Cramér's V. = .047
Both parents	8.7 (8.0-9.6)	91.3 (90.4-92.0)	
<b>Type of school</b>			<b>N = 7 497</b>
ESC-classes sup.	8.2 (6.5-10.0)	91.8 (90.0-93.5)	
ESG-classes sup.	8.1 (6.3-10.1)	91.9 (89.9-93.7)	
Formation prof.	9.5 (7.2-12.1)	90.5 (87.7-92.7)	
ESC-classes inf.	9.2 (7.6-10.9)	90.8 (89.1-92.3)	$p < .001$
ESG-classes inf. (VO)	11.1 (9.7-12.7)	88.9 (87.3-90.3)	Cramér's V. = .088
ESG-classes inf. (VP)	18.7 (15.4-22.1)	81.3 (77.7-84.4)	
EF	8.6 (7.3-9.9)	91.4 (90.1-92.7)	

Respondents were asked how often they have taken part in cyberbullying in the past couple of months. The answer options ranged from "I have not cyberbullied another person in the past couple of months" (1) to "several times a week" (5). Cyberbullying perpetration was categorised in: victim (categories 2-to-5) and non-victim (category 1). The results are in % (95% Confidence Interval).

## Physical fighting

Figure 50: Physical fighting according to sociodemographic groups



**Table 26: Physical fighting according to sociodemographic groups**

	Had been involved in a fight (2-5)	Had not been involved in a fight (1)	Chi square test
<b>All</b>			<b>N = 7 505</b>
	29.5 (28.5-30.6)	70.5 (69.4-71.5)	
<b>Age</b>			<b>N = 7 505</b>
11-12 years	40.2 (38.0-42.4)	59.8 (57.6-62.0)	
13-14 years	31.2 (29.2-33.2)	68.8 (66.8-70.8)	$p < .001$
15-16 years	23.2 (21.4-25.0)	76.8 (75.0-78.6)	$\gamma = -.249$
17-18 years	22.1 (20.0-24.3)	77.9 (75.7-79.9)	
<b>Age x Gender</b>			<b>N = 3 666</b>
Girls 11-12	27.1 (24.3-29.9)	72.9 (70.1-75.7)	
Girls 13-14	24.4 (21.8-27.1)	75.6 (72.9-78.2)	$p < .001$
Girls 15-16	13.9 (11.9-16.1)	86.1 (83.9-88.1)	$\gamma = -.273$
Girls 17-18	13.0 (10.7-15.7)	87 (84.5-89.4)	
			<b>N = 3 789</b>
Boys 11-12	52.6 (49.5-55.7)	47.4 (44.3-50.5)	
Boys 13-14	37.7 (34.7-40.6)	62.3 (59.3-65.2)	$p < .001$
Boys 15-16	32.9 (30.1-35.9)	67.1 (64.1-69.9)	$\gamma = -.251$
Boys 17-18	30.3 (27.1-33.7)	69.7 (66.3-72.9)	
<b>Gender</b>			<b>N = 7 455</b>
Girls	20.0 (18.7-21.3)	80.0 (78.7-81.3)	$p < .001$
Boys	38.9 (37.3-40.4)	61.1 (59.6-62.7)	Cramér's V. = .207
<b>Family affluence</b>			<b>N = 7 307</b>
High	27.9 (25.8-30.1)	72.1 (69.9-74.2)	$p = .027$
Medium	29.4 (28.0-30.7)	70.6 (69.3-72.0)	$\gamma = -.051$
Low	31.8 (29.2-34.4)	68.2 (65.6-70.8)	
<b>Migration background</b>			<b>N = 7 327</b>
First generation	33.6 (31.4-36.0)	66.4 (64.0-68.6)	$p < .001$
Second generation	30.8 (29.3-32.3)	69.2 (67.7-70.7)	Cramér's V. = .079
No migration	24.0 (22.3-25.9)	76.0 (74.1-77.7)	
<b>Family structure</b>			<b>N = 7 187</b>
Others	40.4 (33.0-48.6)	59.6 (51.4-67.0)	
Stepfamily	32.3 (29.1-35.6)	67.7 (64.4-70.9)	$p < .001$
Single parent	33.8 (31.5-36.2)	66.2 (63.8-68.5)	Cramér's V. = .074
Both parents	27.1 (25.8-28.4)	72.9 (71.6-74.2)	
<b>Type of school</b>			<b>N = 7 505</b>
ESC-classes sup.	12.1 (10.1-14.3)	87.9 (85.7-89.9)	
ESG-classes sup.	22.6 (19.9-25.6)	77.4 (74.4-80.1)	
Formation prof.	29.8 (26.2-33.8)	70.2 (66.2-73.8)	
ESC-classes inf.	21.4 (19.2-23.8)	78.6 (76.2-80.8)	$p < .001$
ESG-classes inf. (VO)	31.0 (28.8-33.3)	69.0 (66.7-71.2)	Cramér's V. = .225
ESG-classes inf. (VP)	41.5 (37.2-45.8)	58.5 (54.0-62.6)	
EF	42.5 (40.2-44.8)	57.5 (55.2-59.7)	

Respondents were asked how many times they were involved in a fight in the past 12 months. The answer options ranged from "I have not been in a physical fighting in the past 12 months" (1) to "5 times or more" (5). Physical fighting was categorised in: had been involved in a fight (categories 2-to-5) and had not been involved in a fight (category 1). The results are in % (95% Confidence Interval).

## Bullying in school: a closer look

**Table 27: WHO-5 Index score mean according to bullying victimisation**

		Well-being
Bullying victimisation	I have not	14.44 (14.31-14.57)
	Once or twice	13.31 (12.95-13.66)
	2-3 times per month	11.99 (11.32-12.67)
	Once a week	11.93 (10.86-13.00)
	Several times a week	12.40 (11.54-13.26)

**Table 28: Comparison WHO-5 Index score mean according to type of school**

Type of school	Bullying victimisation		T-test
	No	Yes	
EF	16.80 (16.54-17.06)	14.63 (14.14-15.11)	$t(1754) = 8.21, p < .001$
ESG-classes inf. (VP)	14.87 (14.27-15.47)	13.94 (13.02-14.86)	$t(482) = 1.63, p = .104$
ESG-classes inf. (VO)	14.39 (14.09-14.68)	11.91 (11.34-12.48)	$t(1584) = 7.79, p < .001$
ESC-classes inf.	14.19 (13.88-14.51)	11.93 (11.22-12.64)	$t(1211) = 5.73, p < .001$
Formation Prof.	13.20 (12.73-13.67)	11.13 (9.86-12.40)	$t(518) = 3.28, p = .001$
ESG-classes sup.	12.65 (12.26-13.03)	11.31 (10.26-12.37)	$t(793) = 2.27, p = .024$
ESC-classes sup.	13.19 (12.87-13.52)	10.58 (9.40-11.76)	$t(918) = 4.62, p < .001$



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## Abbreviations

EF	<i>Enseignement Fondamental</i>
ESC	<i>Enseignement Secondaire Classique</i>
ESG	<i>Enseignement Secondaire Général</i>
FAS	Family Affluence Scale
FP	<i>Formation Professionnelle</i>
HBSC	Health Behaviour in School-aged Children (study/survey)
SCRIPT	<i>Service de Coordination de la Recherche et de l'Innovation pédagogiques et technologiques</i>
VO	<i>Voie d'orientation</i>
VP	<i>Voie de préparation</i>
WHO	World Health Organization



# Reports on the Luxembourg HBSC Survey 2022

This report is part of a series of 5 thematic reports based on the HBSC survey 2022:

- Mental health and well-being of school-aged children in Luxembourg
- Health behaviours of school-aged children in Luxembourg
- Risk behaviours of school-aged children in Luxembourg
- Social context of school-aged children in Luxembourg
- COVID-19 impact and trends in health of school-aged children from 2006-2022 in Luxembourg

The reports are available in English, French and German and can be downloaded from the website [www.hbsc.lu](http://www.hbsc.lu). A methodological report and an interactive data visualization between 2006 and 2022 are also available in the website.



## Report on the Luxembourg HBSC Survey 2022

### HEALTH BEHAVIOUR IN SCHOOL-AGED CHILDREN (HBSC) STUDY

This report provides information on risk behaviours of adolescents aged 11 to 18 years old attending Luxembourg public and private schools whose teaching is based on the national curriculum in 2022.

The prevalence in most risk behaviours has decreased or has been stable in most areas since 2018. The prevalence of cannabis users and problematic social media users has increased over this period, however. Overall, age, family structure, and type of school involved the largest differences. The older a respondent was, the higher the probability of engaging in risk behaviours. This age pattern was only partly reflected in the relation between such behaviours and the type of school attended. In most cases, differences between ESG pupils and ESC pupils were found. Attendees of *ESG formation professionnelle* exhibited a higher probability to engage in risk behaviours than attendees of other types of school. Living with both parents played a protective role against risk behaviours in a large majority of cases. Gender, migration background, and family affluence related less systematically to risk behaviours than age, family structure, and type of school.

This report further explores bullying victimisation in school. Gender, family structure and type of school are the factors associated with bullying. In addition, adolescents who had not been bullied exhibited higher levels of well-being than adolescents who had been bullied, with the exception of *ESG voie de préparation* attendees (no significant difference was found).

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