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HEALTH BEHAVIOUR IN
SCHOOL-AGED CHILDREN
LËTZEBUERG / LUXEMBOURG

Social context in 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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Joana Lopes Ferreira
Felipe G Mendes
Carolina Catunda

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Contributors

Authors

Joana Lopes Ferreira, M.Sc. Research and development specialist, University of Luxembourg

Dr Felipe G Mendes Postdoctoral researcher, University of Luxembourg

Dr Carolina Catunda Research scientist, University of Luxembourg

HBSC Luxembourg Team

Dr Romain Brisson University of Luxembourg

Dr Carolina Catunda Co-Principal Investigator, University of Luxembourg

Dr Senad Karavdic *Service de Coordination de la Recherche et de l'Innovation pédagogiques et technologiques (SCRIPT)*

Joana Lopes Ferreira, M.Sc. University of Luxembourg

Dr Felipe G Mendes University of Luxembourg

Dr Maud Moinard Co-Principal Investigator, Ministry of Health and Social Security/Health Directorate

Dr Josepha Nell Ministry of Education, Children and Youth/*Service national de la jeunesse*

Dr Katharina K Pucher Ministry of Health and Social Security/Health Directorate

Dr Caroline Residori Research and development specialist, University of Luxembourg

Prof Dr Robin Samuel Associate professor, University of Luxembourg

Aurélie Ventujol, M.Sc. *Service de Coordination de la Recherche et de l'Innovation pédagogiques et technologiques (SCRIPT)*

Raoul Wirion, M.A. Ministry of Education, Children and Youth

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.

The Luxembourg part of the HBSC study has been organised by three project partners since 2016: the University of Luxembourg, the Ministry of Health and Social Security/Health Directorate, and the Ministry of Education, Children and Youth. We would like to express our sincere thanks to our contacts in the ministries (Dr Katharina Pucher, Dr Senad Karavdic, Aurélie Ventujol, Dr Josepha Nell, Georges Metz) and to Professor Robert Harmsen, Dean of the Faculty of Humanities, Education and Social Sciences, for the good cooperation and support of our research.

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Finally, we would like to express our appreciation and gratitude to all the children and young people who have consented to and participated in the HBSC Luxembourg study over the years, as well as to their parents. In addition, we would like to thank all the school headmasters and teachers whose cooperation made this study possible.

For the HBSC Luxembourg team:

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

Summary

About this report

This report presents the results related to the social context of 7 893 adolescents aged 11 to 18 who took part in the Health Behaviour in School-aged Children survey conducted in Luxembourg in 2022. It provides comprehensive information on the following areas: school satisfaction, schoolwork pressure, perception of school performance, perceived social support from teachers, classmates, family and friends, communication with parents (mother and father).

School experiences

School experiences encompass various aspects, including school satisfaction, schoolwork pressure, and perception of school performance, as well as support from teachers and classmates. The majority of respondents (59.4%) reported liking school a bit or a lot, a decrease compared to the previous survey round, in 2018. Regarding schoolwork pressure, it increased since 2018: 44.0% reported feeling pressure (some or a lot). The prevalence of adolescents enjoying school or feeling no pressure by schoolwork decreased with age. Additionally, adolescents from low-affluence families and first-generation migrants showed a higher likelihood of liking school a lot and experiencing lower schoolwork pressure compared to their counterparts. Concerning school achievement, 44.5% of adolescents perceived their school performance as good, and 17.8% as very good. In the teacher-student relationship, a significant majority (77.7%) reported that their teachers accept them as they are. Furthermore, 42.3% mentioned that their teachers care about them as individuals, and 48.3% expressed a high level of trust in their teachers. The prevalence of adolescents reporting high teacher support decreased from ages 11 to 13, likely influenced by the transition to secondary school, and remains relatively stable throughout adolescence. In terms of classmate support, 57.3% of the youth in Luxembourg indicated having high support, denoting a decrease compared with 2018. Notably, boys perceived higher classmate support than girls between the ages of 13 and 18.

Relations with family and friends

In this section, the HBSC 2022 survey measured family support, communication with parents, and support from friends. A substantial 61.4% of adolescents in Luxembourg perceived a high level of support from their families. Comparing with 2018, the prevalence of adolescents who reported high support has decreased. The majority of adolescents (78.6%) reported that their families genuinely try to assist them, and 76.3% mentioned their families are willing to help with decision-making. Boys and younger adolescents reported higher levels of family support. When asked about their communication with parents, 2.2% of adolescents in Luxembourg reported they don't have or see their mother, while 8.9% don't have or see their father. Boys more frequently reported to have an easy or very easy communication with both their mother and father. Additionally, adolescents with low family affluence reported more often having a difficult or very difficult communication with both their mother and father compared to their counterparts. Regarding friend support, 61.4% indicated high support from friends, a decrease when comparing with 2018. Girls perceived slightly higher levels of friend support than boys at the age of 11.

Gender identities, social support and mental health

Society and research have increasingly differentiated between biological sex and social gender. Sex refers to the classification based on biological and physiological characteristics (male or female). Gender refers to societal expectations for men and women to comply with certain social norms and roles according to their sex assigned at

birth. In this section, we aimed to compare the levels of perceived social support (teacher, classmates, family and friends) and mental health by cisgender boys, cisgender girls and non-cisgender individuals in secondary schools. Cisgender boys are adolescents who were registered at birth as male and identify as a boy, corresponding to 49.8% of the respondents. Cisgender girls are adolescents who were registered at birth as female and identify as a girl, corresponding to 47.1% of the respondents. Non-cisgender individuals include transgender adolescents and those with a nonbinary gender identity, corresponding to 3.2% of the respondents. Non-cisgender adolescents reported significantly lower ($p < .01$) mean levels of perceived teacher, classmate, family and friends support, lower life satisfaction and worse levels of well-being compared to their cisgender peers. In overall, non-cisgender adolescents in Luxembourg reported worse social support and lower levels of mental health compared to their cisgender peers, corroborating the international literature.

Conclusions and perspectives

In general, gender, age, family affluence and migration background were associated with the social context indicators in HBSC 2022 survey. Boys and younger adolescents more often perceived high support from teachers, classmates and family and reported easier communication with their parents, than girls and older adolescents. Furthermore, social inequalities are repeatedly presented in adolescent's social experiences. In this report, additional analyses were conducted to explore the relation between gender identity (including more than cisgender boys and girls) and social support and mental well-being. Compared to their cisgender peers, they indicated worse levels of social support (family, friends, teachers, and classmates), and mental health (life satisfaction and well-being). Generally, the school setting is a privileged environment to develop interventions that promote a healthy adolescence. In Luxembourg, several organisations and foundations contribute to the promotion and development of adolescent's health and relationships.

Social context

Social context

Adolescence is a developmental phase particularly influenced by the social interaction and relationships. Adolescents' health and well-being are not only determined by individual factors, but also by the immediate social environment, such as their peers, parents and teachers, as well as the wider social environment, such as their place of residence and their school (World Health Organization, 2014; World Health Organization & UNESCO, 2018). As part of their developmental course, adolescents seek autonomy and individuation (Zimmer-Gembeck & Collins, 2003) that triggers a change of power in the relationship with their parents. In this process, adolescents tend to perceive a temporary decrease of support from their parents and an increase of conflict with them (Goede et al., 2009). Concurrently, the relationship with friends is characterised by common interests, companionship, intimacy and support and it is fundamental for their socialisation and acquisition of social skills, for their emotional and cognitive development, as well as the development of their identity (Collins & Steinberg, 2008; Lenzi et al., 2012; Moore et al., 2018; Ragelienė, 2016). Henceforward, the time they spent with their family decreases while the time spent at school and with friends increases (Lam et al., 2012).

Moreover, adolescent's identity development interlinks the educational and interpersonal domain (Albarelo et al., 2018). Indeed, school is also a core context in adolescents' life as it is where they spend a considerable amount of their time. A positive school experience (e.g. liking school, low schoolwork pressure, high perceived support from their teachers and classmates) is associated with better health outcomes (Aldridge & McChesney, 2018; Bi et al., 2021; Joyce & Early, 2014; Steare et al., 2023).

The preventive measures related to the COVID-19 pandemic created major disruptions in societal norms all around the world. Measures implemented at the school level, including school closures deeply affected adolescents' life (Krishnaratne et al., 2020), interfering with their school experiences and reducing their social contact and peer support (Elgar et al., 2023; Garagiola et al., 2022; Hammerstein et al., 2021).

A total of 9 432 pupils from 688 classes and 152 schools attending Luxembourg schools responded to an anonymised paper-pencil questionnaire in class, during school hours, in the year 2022. Data of 7893 pupils aged 11 to 18, attending Luxembourg public and private schools whose teaching is based on the national curriculum¹ was analysed to provide an overview of adolescents' social context in Luxembourg. More specifically, this report aims to explore school satisfaction, schoolwork pressure, school performance, communication with mother and father and perceived support from family, teacher, classmates, and friends. This publication along with the other reports about mental health, health, and risk behaviours as well as the perceived impact of Covid-19 and the trends between 2006-2022 contributes to an overview of adolescents' health and health behaviours in 2022 in Luxembourg.

¹ For more information on the population, please refer to Catunda, Mendes, and Lopes Ferreira (2023).

School experiences

School is a key setting for promoting children's and adolescents' physical and mental health as well as their well-being (World Health Organization & UNESCO, 2021).

School connectedness is frequently characterised as relationships at school involving care, respect and support as well as positive feelings, such as liking or enjoying school (García-Moya et al., 2019). School satisfaction is a subjective and cognitive evaluation of well-being in school (Epstein & McPartland, 1976). Previous research has pointed out that school satisfaction is associated with a higher level of life satisfaction, a better assessment of one's own health, a lower incidence of psychological and somatic complaints, fewer risk behaviours including substance use and better perceived academic competence (Danielsen et al., 2011; Joyce & Early, 2014; Låftman et al., 2021; Langille et al., 2015; Rovis et al., 2015; Vogel et al., 2015). Conversely, adolescents with low school satisfaction are more prone to consume substances, to use screens for prolonged periods of time and to report lower well-being (Dimitrova et al., 2020; Khan et al., 2022; Moor et al., 2015; Wu & Becker, 2023).

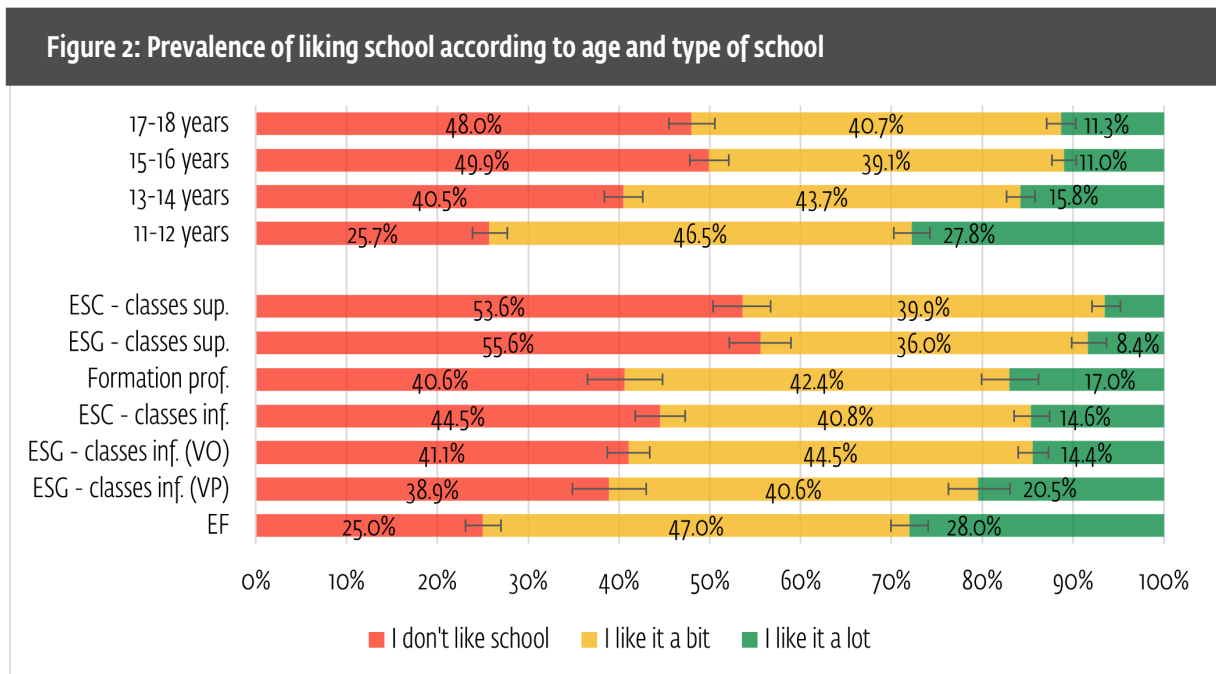
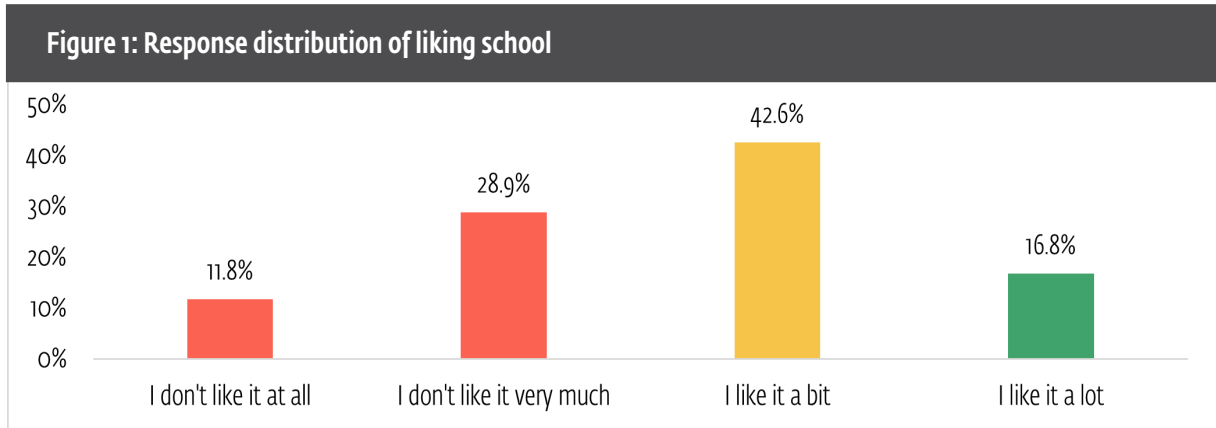
In the school context, adolescents also experience stress when the demands (in this case at school) are higher than their ability to cope and respond to them (Lazarus, 1966; Lazarus & Folkman, 1984). Schoolwork pressure is associated with health complaints and lower life satisfaction, mental health problems, prolonged screen use and lower academic performance (Cosma et al., 2020; Khan et al., 2022; Pascoe et al., 2020; Steare et al., 2023).

Support in relationships at school includes (within others) classmates and teacher support. Good school climate, including social connectedness, has a positive impact in mental health and well-being (Aldridge & McChesney, 2018). Pupils that reported high teacher support present better school engagement and achievement and higher well-being (Engels et al., 2016; Hoferichter et al., 2022; Joyce & Early, 2014; Wentzel et al., 2017). Moreover, lower classmate support demonstrated associations with higher levels of loneliness as well as with internalising problems for girls and for boys (Rueger et al., 2010; Rueger et al., 2016; Zheng et al., 2022).

School satisfaction

The HBSC survey measures school satisfaction with the item "How do you feel about school at the present?" on a scale ranging from 1 ("I like it a lot") to 4 ("I don't like it at all"). Figure 1 shows that 16.8% of the adolescents liked school a lot followed by 42.6% that liked it a bit. However, 40.7% of the adolescents didn't like school. In 2022 the prevalence of adolescents who like school (a lot or a bit) decreased compared to 2018 (2018: 18.2% and 46.8%, respectively), while the prevalence of those who don't like school (a lot or a bit) increased (2018: 35.2%; Heinz et al., 2020). School satisfaction has also decreased in other European countries among the adolescents 11, 13 and 15 years old (Folkhälsomyndigheten, 2023; Gaspar et al., 2022; Gruppo HBSC-Italia 2022, 2023; Hulbert et al., 2023; Inchley, Mabelis, et al., 2023).

For more detailed analysis, the answers were categorised in: I don't like school (categories 3 and 4), I liked it a bit (category 2) and I liked it a lot (category 1). As shown in Figure 2, 11-12 years old adolescents were more prone to report liking a lot of school than their counterparts (e.g.: 11-12 years old: 27.8% vs 17-18 years old: 11.3%). This age pattern was present independently of gender and is similar in other countries (Elgar et al., 2023).

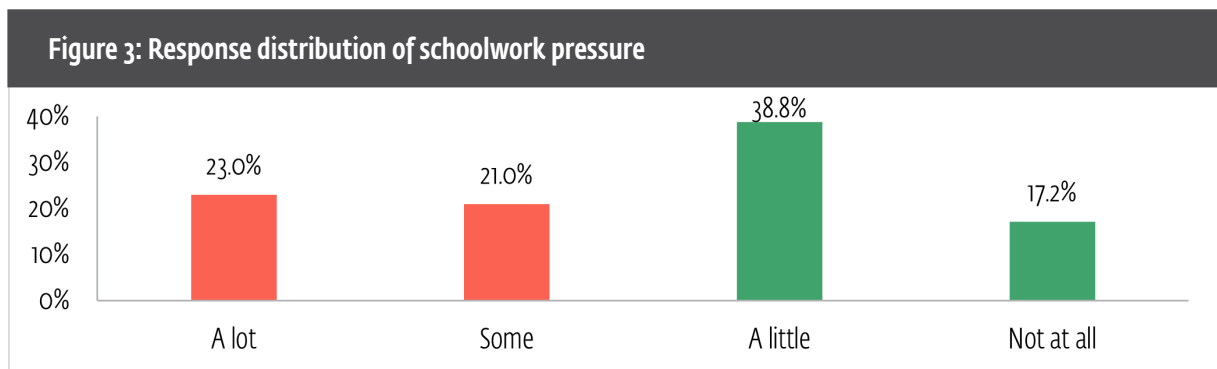


Focusing on type of school (Figure 2), adolescents in *Enseignement Fondamental* (28.0%) were more prone to like school a lot, while *classes supérieures* of ESC and ESG (6.5% and 8.4%, respectively) were less prone. Moreover, among the *classes inférieures* and *supérieures*, pupils at ESG- *voie de préparation* and *Formation professionnelle* were more prone to like school a lot. This pattern is in line with the results related to age (Figure 2) and pattern found in 2018 (Heinz et al., 2020).

Adolescents from low affluence families (19.5%) and belonging to the first generation of migration (19.8%) were more prevalent to report liking school a lot, when compared with their counterparts (comprehensible details, see appendix, Figure 27 and Table 2). These results are in line with the previous round survey as in Luxembourg, the first generation of migration remains the group with higher prevalence in liking school a lot (Heinz et al., 2020). Although the social inequalities varied cross-nationally, Luxembourg and other eight countries follow the same pattern: adolescents (boys and/or girls) from low affluent families stated liking school a lot (Inchley et al., 2020a, 2020b).

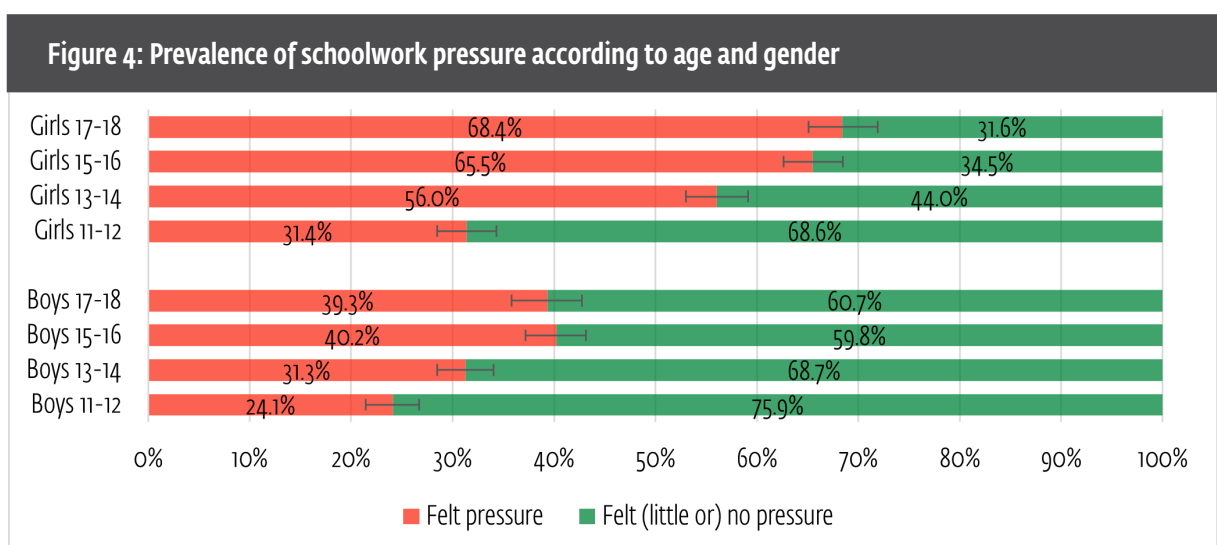
Schoolwork pressure

The HBSC survey assesses the pressure from schoolwork asking adolescents “How pressured do you feel by the schoolwork you have to do?”. The response options ranged from 1 (“not at all”) to 4 (“a lot”). In 2022, 44.0% of the adolescents felt pressure (some or a lot) from their schoolwork (Figure 3).

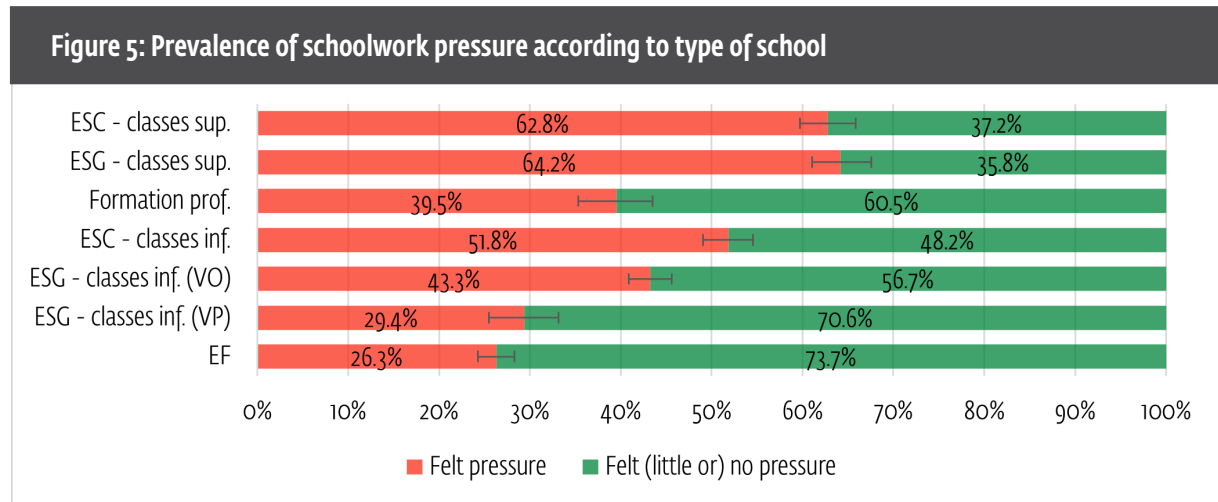


The answers were categorised in: felt pressure (categories 3 and 4) and felt (little or) no pressure (categories 1 and 2). The prevalence of adolescents that feel pressured by schoolwork increased quasi-linearly since 2010 from 32% to 35% in 2014, 40% in 2018 and 44% in 2022 (Health Behaviour in School-aged Children Luxembourg Study, 2023). The results are in line with what was found across other countries in Europe, where the prevalence of adolescents aged 11, 13 and 15 who feel schoolwork pressure has also increased (Folkhälsomyndigheten, 2023; Gaspar et al., 2022; Gruppo HBSC-Italia 2022, 2023; Hulbert et al., 2023; Inchley, Mabelis, et al., 2023).

Schoolwork pressure was related with all the sociodemographic variables. Figure 4 shows that girls were more likely to report schoolwork pressure. The prevalence increased with age for both genders, although the gap between 11-12 and 13-14 years old was steeper for girls than for boys. Similar results were found in a study including 22 European countries (Elgar et al., 2023).



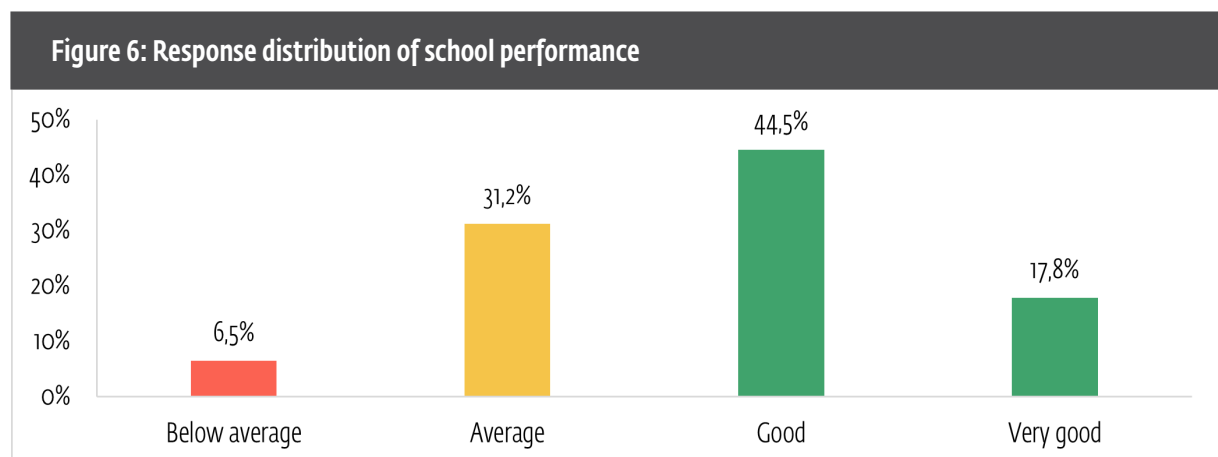
Adolescents from *Enseignement Fondamental*, *ESG - voie de préparation* and *Formation professionnelle* reported less frequently to feel pressured (26.3%, 29.4% and 39.5%; Figure 5). In addition, adolescents from families with high affluence perceived more pressure in comparison to the ones from families with low affluence (46.7% vs 42.1%, respectively), results that were also presented across the HBSC network in 2018 (Inchley et al., 2020b). Furthermore, first generation migrants reported less frequently to feel pressured than their counterparts (see appendix, Figure 28 and Table 3), following the same pattern as in 2018 (Heinz et al., 2020).



It is important to note that liking school and schoolwork pressure were negatively correlated ($r = -.364, p < .001$), therefore adolescents who did not like school were frequently the ones who felt pressure at school. This association was further detailed by gender and type of school in the factsheet [Liking School and Schoolwork Pressure perceptions of school-aged children](#) (Catunda, 2023).

Perception of school performance

In 2022 HBSC survey, adolescents were asked about their perception of their school performance with the item “In your opinion, what does your class teacher(s) think about your school performance compared to your classmates?”. The response ranged from 1 (“very good”) to 4 (“below average”). Less than half the adolescents (44.5%) selected the option good and 31.2% the option average (Figure 6). The option below average was the least selected (6.5%).



According to previous research, school performance is associated with school satisfaction and schoolwork pressure (Danielsen et al., 2011; Pascoe et al., 2020). Table 1 presents the aforementioned relations in Luxembourg. Most pupils who considered their school performance as being below average didn't like school (70.9%) and felt schoolwork pressure (62.4%), while within those who considered their school performance as very good, only 24.1% didn't like school and 32.5% felt schoolwork pressure. This pattern is consistent with the HBSC Luxembourg results from 2014 (Heinz et al., 2018).

Table 1: Relationship between school performance, school satisfaction, and school pressure

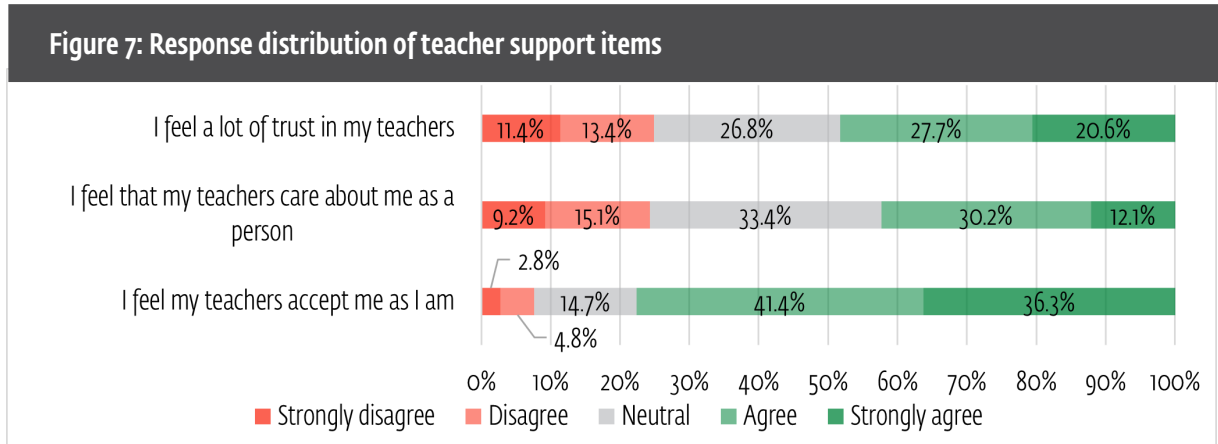
	School performance				Chi square test
	Very good	Good	Average	Below Average	
School satisfaction					N = 7 488
Don't like school	24.1% (21.9 – 26.4)	33.2% (31.6 – 34.8)	54.3% (52.2 – 56.3)	70.9% (66.8 – 74.9)	$p < .001$ Cramér's V. = .235
Like a bit	42.2% (39.6 – 44.9)	48.8% (47.1 – 50.5)	38.5% (36.6 – 40.5)	22.9% (19.2 – 26.7)	
Like a lot	33.7% (31.2 – 36.3)	18.0% (16.7 – 19.3)	7.2% (6.3 – 8.4)	6.2% (4.3 – 8.6)	
Schoolwork pressure					N = 7 485
Felt pressure	32.5% (30.1 – 35.1)	38.2% (36.5 – 39.8)	55.5% (53.5 – 57.6)	62.4% (58.1 – 66.7)	$p < .001$ Cramér's V. = .203
Felt (little or) no pressure	67.5% (64.9 – 69.9)	61.8% (60.2 – 63.5)	44.5% (42.4 – 46.5)	37.6% (33.3 – 41.9)	

Note: 95% of Confidence Interval

Teacher support

HBSC survey assesses perceived social support from teachers based on a scale developed by Torsheim et al. (2000) with three items ["I feel my teachers accept me as I am"; "I feel that my teachers care about me as a person"; "I feel a lot of trust in my teachers"]. The response options ranged from 1 ("strongly disagree") to 5 ("strongly agree"). In Figure 7 is presented the response distribution of each item. Most of the adolescents reported that their teachers accept them as they are (77.7%). About half (48.3%) stated feeling a lot of trust and 42.3% of the adolescents reported that their teachers care about them as a person.

For the following results, a mean score was computed, ranging from 1-to-5, with higher scores representing higher levels of support. According to the HBSC International Protocol (Inchley, Currie, et al., 2023), adolescents who scored 4 or more are considered as perceiving a high teacher support, representing 41.2% of the adolescents in Luxembourg (for comprehensive details, see appendix, Figure 29, Table 4 and Table 5). The prevalence of adolescents who reported high teacher support was similar in 2018 41.4% (value calculated using the same cut-off). As in Luxembourg, the levels of teacher support perceived by the adolescents aged 11, 13 and 15 in Portugal have remained stable, while in England, Italy and Scotland these levels have decreased (Gaspar et al., 2022; Gruppo HBSC-Italia 2022, 2023; Hulbert et al., 2023; Inchley, Mabelis, et al., 2023).



All the sociodemographic variables explored were related with teacher support. In Figure 8, the perception of teacher support decreases from 11 to 13 years old, likely due to the transition to secondary school, and remains relatively stable throughout adolescence (for example, boys: $M_{11 \text{ YEARS OLD}} = 4.14$; 95% CI [4.06, 4.21] vs $M_{18 \text{ YEARS OLD}} = 3.40$; 95% CI [3.29, 3.51]). The aforementioned decrease is independent of gender, however boys reported higher teacher support than girls, at the ages 13, 14, 17 and 18. Similar results were found in the 2022 HBSC survey in England (Hulbert et al., 2023).

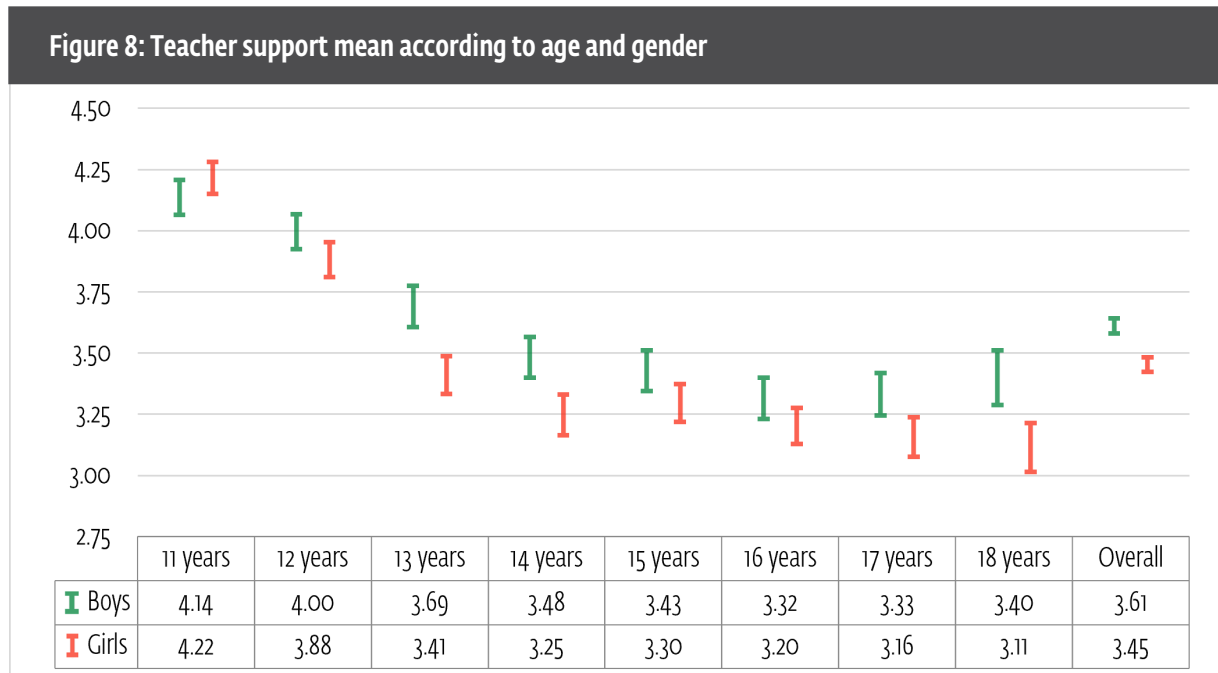
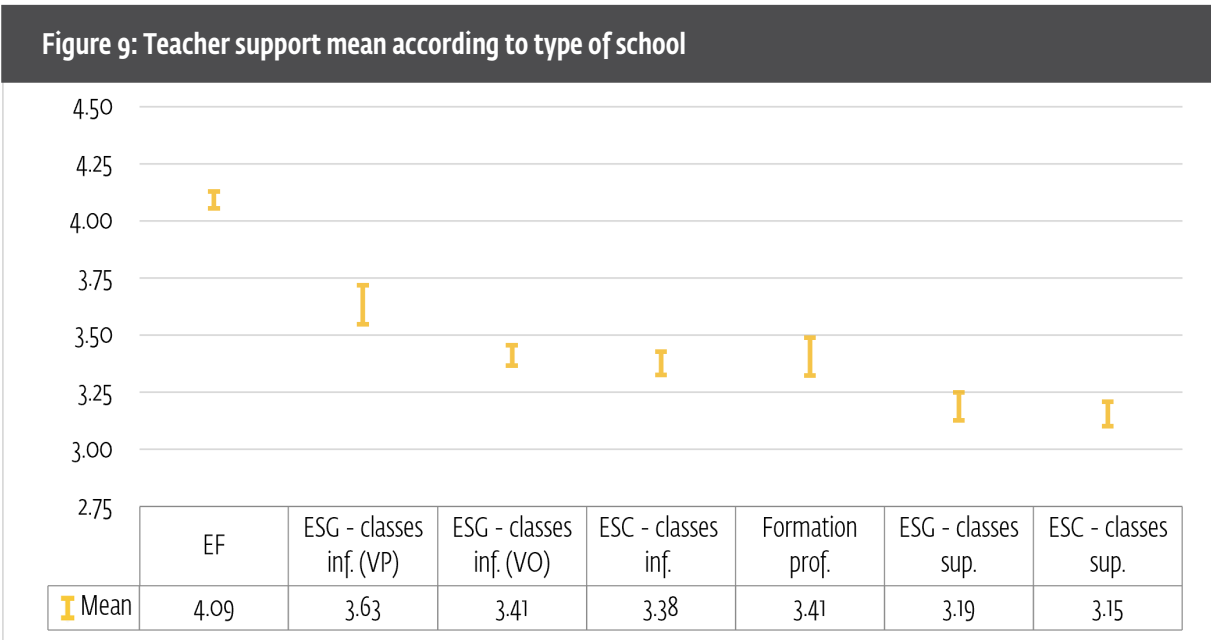


Figure 9 presents the teacher support according to type of school. It is possible to differentiate four groups according to the level of support. Adolescents in *Enseignement Fondamental* are the ones with the highest levels of teacher support ($M_{EF} = 4.09$; 95% CI [4.05, 4.13]) followed by ESG- *voie de préparation*. The third group is composed by ESG- *voie d'orientation*, *classes inférieures* of ESC and *Formation professionnelle*. Lastly, the adolescents among the *classes supérieures* of ESG and ESC presented lower level of teacher support (for example, $M_{ESC-CLASSES SUP} = 3.15$; 95% CI [3.10, 3.21]).

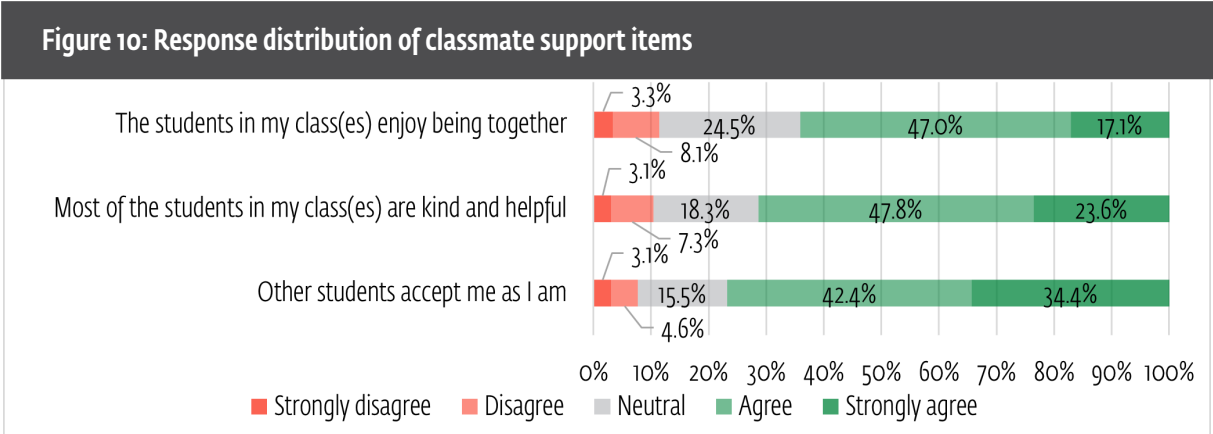


Additionally, adolescents from a high affluence family, those living with single parents and with second-generation of migration perceived lower levels of support from their teachers in comparison with their counterparts (see appendix, Figure 29, Table 4 and Table 5).

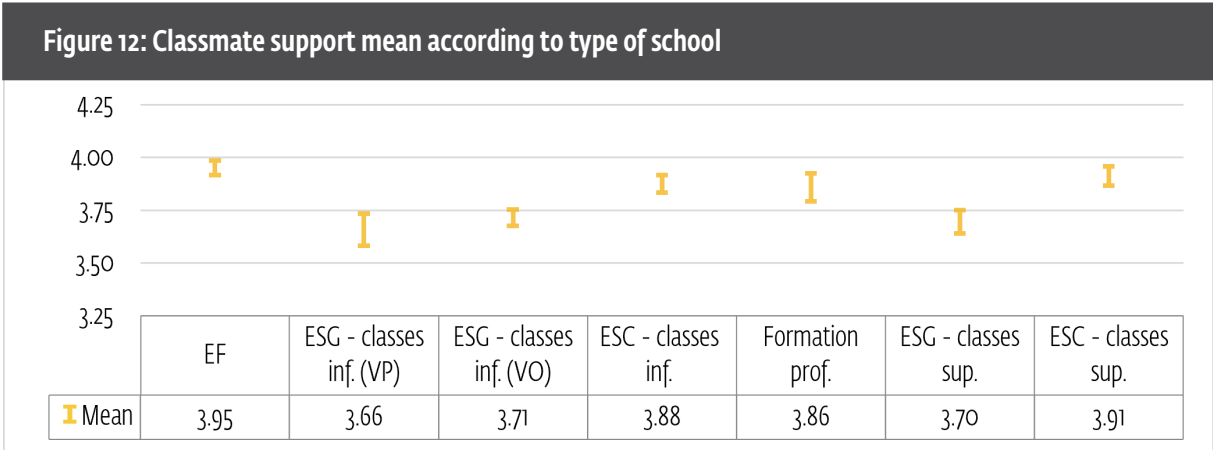
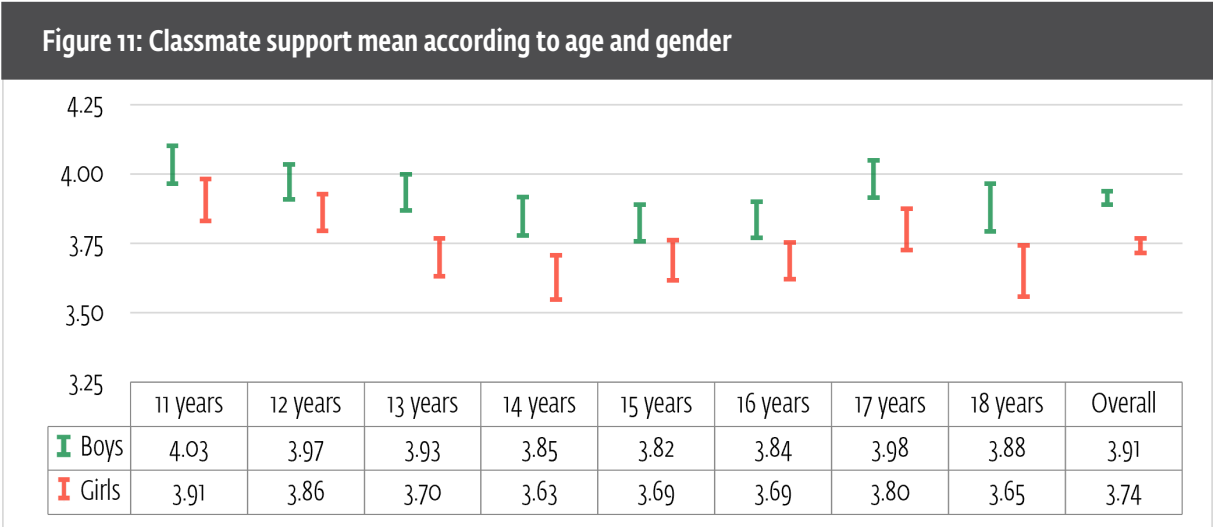
Classmate support

In 2022 HBSC survey, adolescents were asked three questions about classmate support based on a scale developed by Torsheim et al. (2000). The items were the following: “the pupils in my class(es) enjoy being together”; “most of the pupils in my class(es) are kind and helpful”; “other pupils accept me as I am”. Each response ranged from 1 (“strongly disagree”) to 5 (“strongly agree”). Figure 10 displays the response distribution of each item. Most pupils (76.8%) considered that they were accepted as they are by the others, being the most positively perceived item, followed by most of the pupils are kind and helpful (71.4%).

For what follows the mean of the three questions was used, varying between 1 and 5, with higher scores indicating a higher support. Based on the HBSC International Protocol (Inchley, Currie, et al., 2023), adolescents that scored 4 or more are considered to have a high classmate support, corresponding to 57.3% of the adolescents in Luxembourg (for comprehensive details, see appendix, Figure 30, Table 6 and Table 7). The prevalence of youth in Luxembourg that reported high classmate support decreased 7 percentage points compared with HBSC data in 2018, which was 64.2% (value calculated using the same cut-off used in the present report). A decrease in classmate support has also been reported by other European countries such as England, Scotland and Sweden in adolescents aged 11, 13 and 15 (Folkhälsomyndigheten, 2023; Hulbert et al., 2023; Inchley, Mabelis, et al., 2023).



All the sociodemographic variables analysed were associated with classmate support. In general, boys perceived higher classmate support than girls (with the exception of 11- and 12-years old groups with no significant differences; Figure 11). A similar age and gender pattern was also found in England (Hulbert et al., 2023).



Pupils from *Enseignement Fondamental*, *Formation professionnelle* and *classes inférieures* and *supérieures* of ESC reported the highest levels of classmate support (e.g., $M_{EF} = 3.95$; 95% CI [3.92, 3.99]; Figure 12). Furthermore, adolescents from families with high affluence, who live with both parents and those with no migration background reported higher support from their classmates than their respective peers (for comprehensive details, see appendix, Figure 30, Table 6 and Table 7). In 2018 HBSC survey, the same pattern of family affluence inequalities was shown by several of the countries (Inchley et al., 2020a).

Relationship with family and friends

Social support is a multidimensional construct embracing different roles (e.g., provider vs. recipient), types (e.g., emotional vs. informational), and sources (e.g., peers vs. family). A key distinction differentiates between received social support and perceived social support. Received social support refers to the support actually provided to an individual; perceived social support, refers to the support potentially available to aid an individual to cope with stressors (Drageset, 2021). The HBSC study relies on measures of perceived social support. More precisely, the survey assesses perceived social support from family, friends, classmates, and teachers. Classmate and teacher support was addressed in the previous section. In the present section perceived social support from family and friends, as well as communication with parents will be explored.

Research has found perceived social support to be positively linked to well-being indicators (Bi et al., 2021; Brisson et al., 2023; Chu et al., 2010) and negatively linked to depression, anxiety, and externalising behaviours (Demaray & Malecki, 2002; Kaltiala-Heino et al., 2001; Scardera et al., 2020).

Ease of communication with parents is a key indicator of the quality of the relationship between adolescents and their parents. This indicator is associated with several health and well-being outcomes, such as anxiety or depression (Arnarsson et al., 2019; Brooks et al., 2015; Moreno et al., 2009), as well as academic achievement, social skills, and self-confidence (Arnarsson et al., 2019). Parental communication is one of the oldest measures of the HBSC study. Analyses of the trends in ease of communication with parents have found an increase over the past decades, with adolescents generally reporting an easier communication with mothers than with fathers (Arnarsson et al., 2019; Tabak et al., 2012).

Family support

HBSC survey uses the Multidimensional Scale of Perceived Social Support (MSPSS; Zimet et al., 1988) to measure family and friends support. Four items refer to family support: "My family really tries to help me"; "I get the emotional support I need from my family"; "I can talk about my problems with my family"; "My family is willing to help me make decisions". The response options ranged from 1 ("very strongly disagree") to 7 ("very strongly agree").

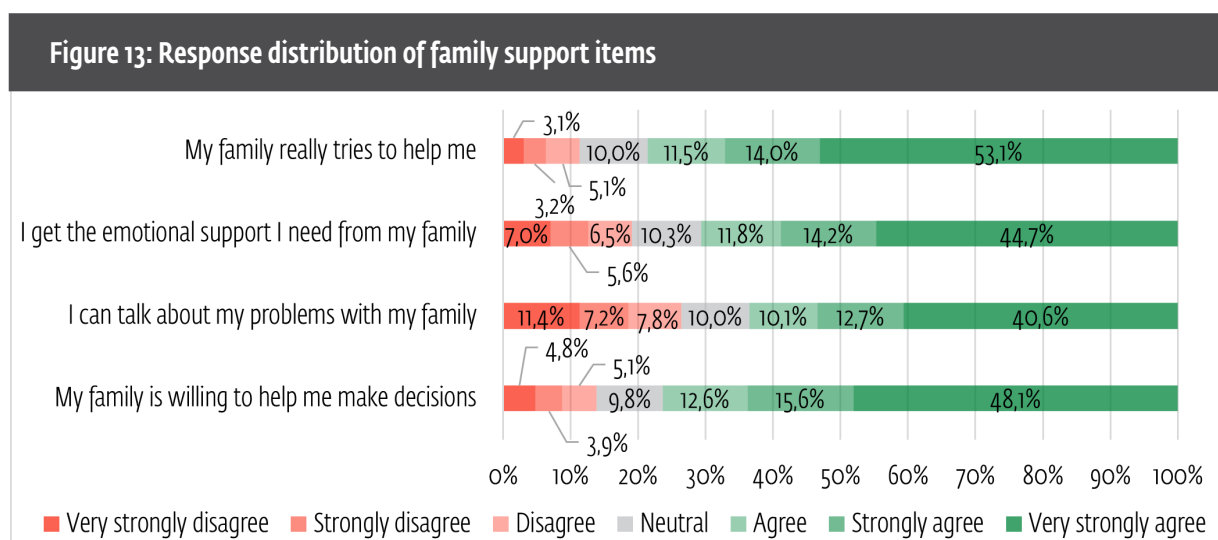
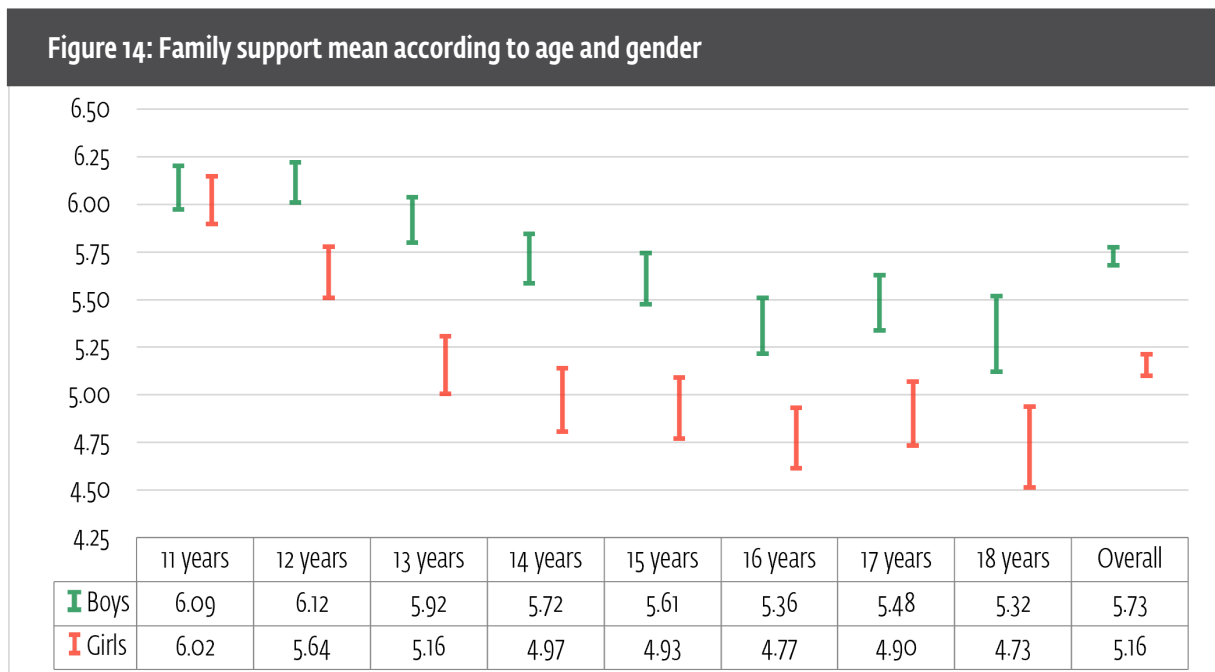


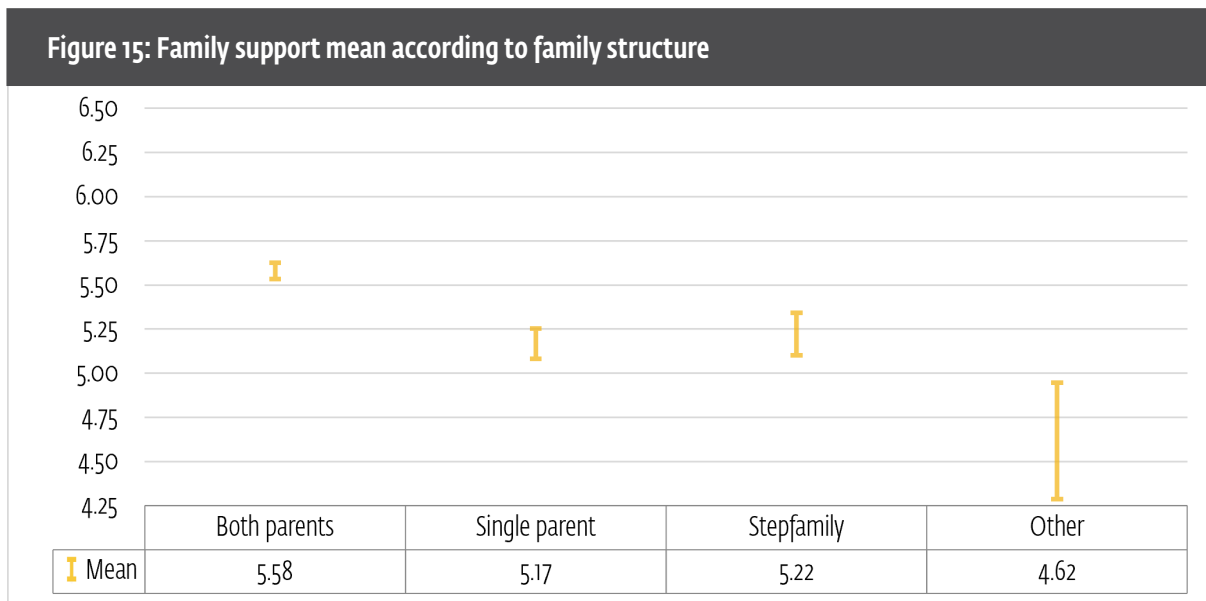
Figure 13 displays the response distribution of the abovementioned items. Most of the adolescents reported that their family really tries to help them (78.6%), and they are willing to help them to make decisions (76.3%), being the most positively evaluated items. On the other hand, 26.4% disagreed they can talk about their problems to their family, being the most negatively evaluated item.

For the next step, mean values were calculated to indicate the level of family support, ranging between 1 and 7, with higher scores corresponding to a higher perception of support. According to the HBSC International Protocol (Inchley, Currie, et al., 2023), adolescents who scored 5.5 or more are considered as having a high family support, accounting for 61.4% of the adolescents in Luxembourg (see appendix, Figure 31, Table 8 and Table 9). The prevalence of pupils who perceived a high family support is lower in 2022 than in 2018 (69.9%, calculated using the same cut-off). This pattern was also found in Portugal and Scotland among adolescents aged 11, 13 and 15 (Gaspar et al., 2022; Inchley, Mabelis, et al., 2023).

All the sociodemographic variables analysed were associated with family support. As shown in Figure 14, boys reported higher levels of family support than girls ($M_{\text{BOYS}} = 5.73$; 95% CI [5.68, 5.78] vs $M_{\text{GIRLS}} = 5.16$; 95% CI [5.10, 5.21]). The levels of family support decrease from age 11 to 16 for both boys and girls and remain rather stable from 16 to 18 years old. No gender differences were found at age 11 ($M_{\text{BOYS}} = 6.09$; 95% CI [6.20, 5.57] vs $M_{\text{GIRLS}} = 6.02$; 95% CI [5.90, 6.15]). The aforementioned decrease is more pronounced for girls than for boys. This pattern was similar in Cyprus and England (Hulbert et al., 2023; Παπαευσταθίου et al., 2023), with older adolescents reporting less support from their families compared to younger ones.



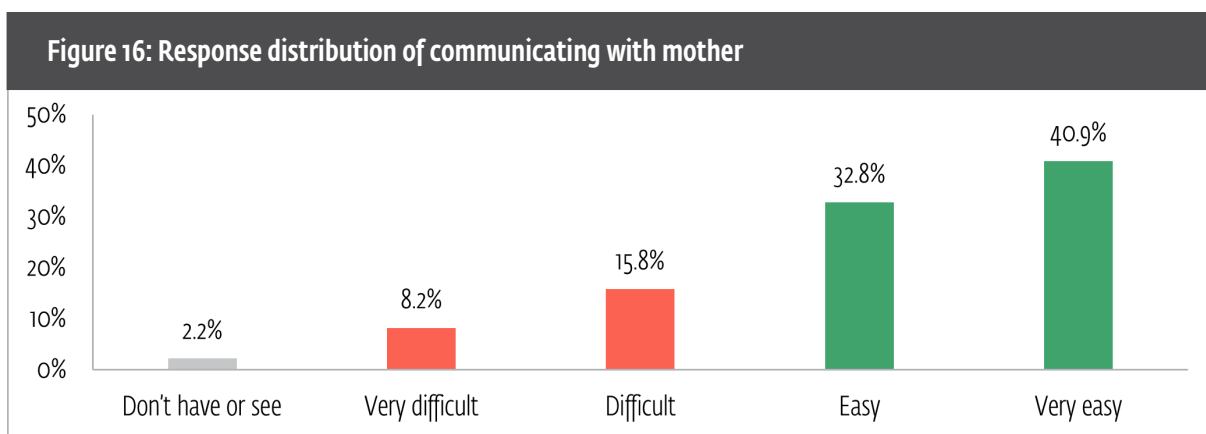
The results also pinpoint that the level of family support is associated with the family structure. Adolescents living with both parents perceived the highest levels of support, followed by those living with a stepparent or single parent and lastly, those living in other family constellations (i.e. in a foster or children's home or with their grandparents; Figure 15).

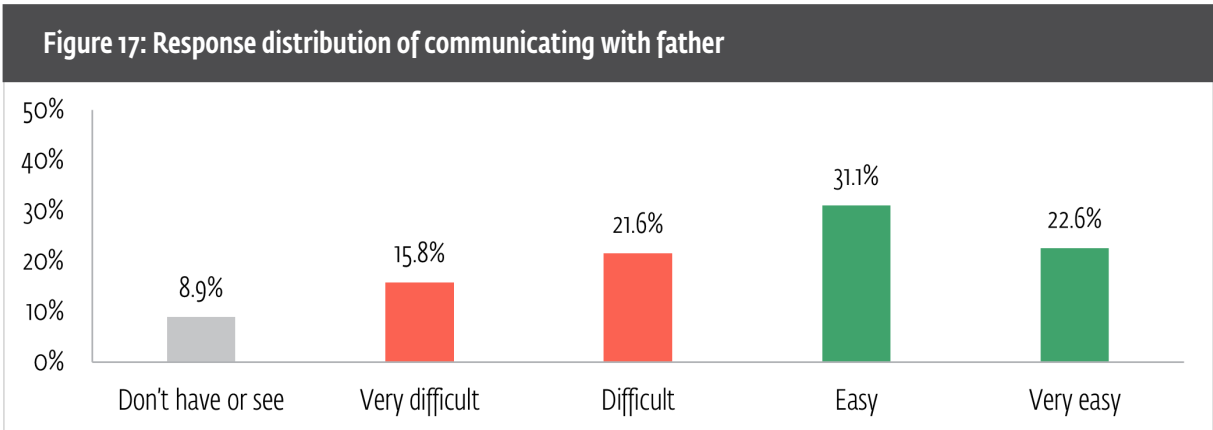


Adolescents from high affluent families ($M = 5.73$; 95% CI [5.66, 5.80]) and those with no migration background ($M = 5.76$; 95% CI [5.70, 5.83]) were more likely to report high levels of family support. Moreover, pupils from *Enseignement Fondamental* and *ESC - classes inférieures* were the ones with higher levels of support from their family, when compared with their counterparts (for comprehensive details, see appendix, Figure 31, Table 8 and Table 9).

Communication with parents

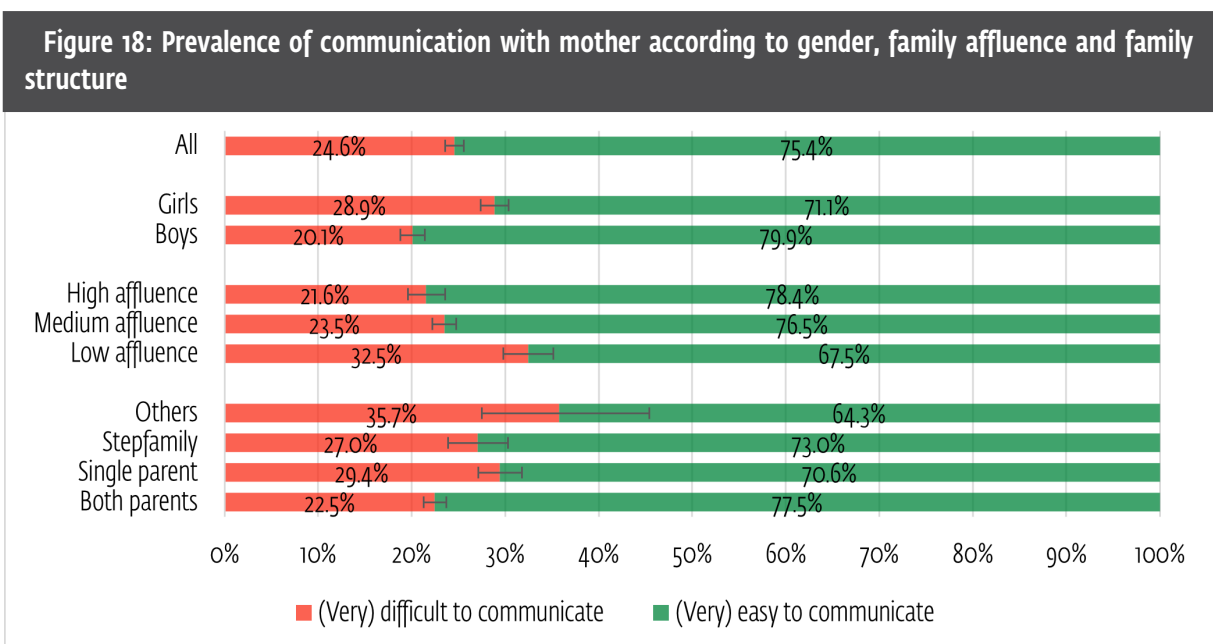
To focus on the communication with parents, the HBSC survey measures the communication with mother and father individually, asking adolescents “How easy it is for you to talk to the following people about things that really bother you?”. Responses ranged from 1 (“very easy”) to 5 (“don’t have or see this person”). Figure 16 and Figure 17 show that 2.2% of the adolescents don’t have or see their mother whereas 8.9% don’t have or see their father. Compared to 2018, a smaller percentage of adolescents don’t have or don’t see their mother (2.6% in 2018) while the percentage of those who don’t have or don’t see their father increased (8.1% in 2018; Heinz et al., 2020).



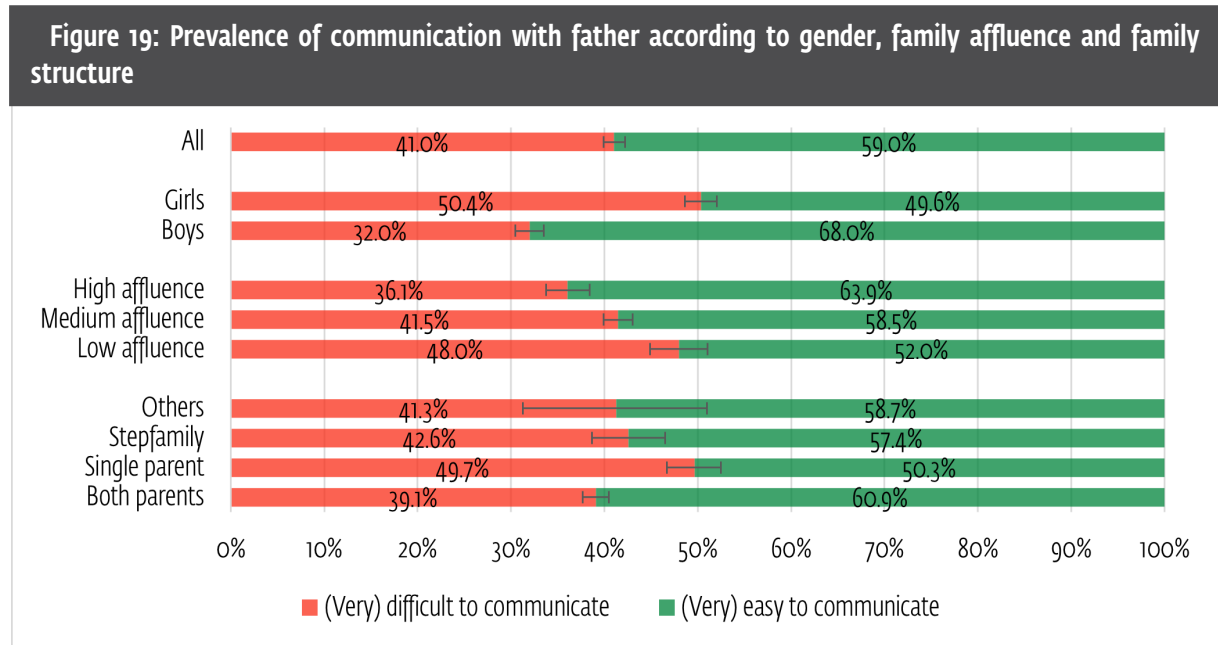


For further analysis, the response category “don't have or see this person” was excluded. The responses of those who reported having a relationship with their mother and father were categorised as: easy or very easy, on the one hand and difficult or very difficult, on the other, adding up to 100%. As shown in Figure 18 and Figure 19, a higher prevalence of adolescents found it easy to communicate with their mother than with their father (75.4% vs 59.0%).

Boys reported more often an (very) easy communication with both their mother and father. However, the gender gap is larger regarding the communication with their father (68.0% of boys found it easy to communicate with their father vs 49.6% of the girls) than with their mother (79.9% of boys and 71.1% of girls). Although the overall ease in communication with their mother and father has remained rather stable since 2018, when analysing prevalence by gender, it's possible to observe a small increase for boys (from 78% to 80%) and a decrease for girls (from 75% to 71%), widening an existing gap in the communication with their mother (Health Behaviour in School-aged Children Luxembourg Study, 2023). Similar results, have been found among 11, 13 and 15 years adolescents in other European countries, where there has been a widening gender gap in communication with their mother and father (Folkhälsomyndigheten, 2023; Hulbert et al., 2023; Inchley, Mabelis, et al., 2023).



Additionally, adolescents with low family affluence reported more often to have a (very) difficult communication with their mother (32.5%) and father (48.0%) than their counterparts. Likewise, the higher the family affluence, the higher the prevalence of adolescents in Luxembourg reporting an (very) easy communication with their fathers.

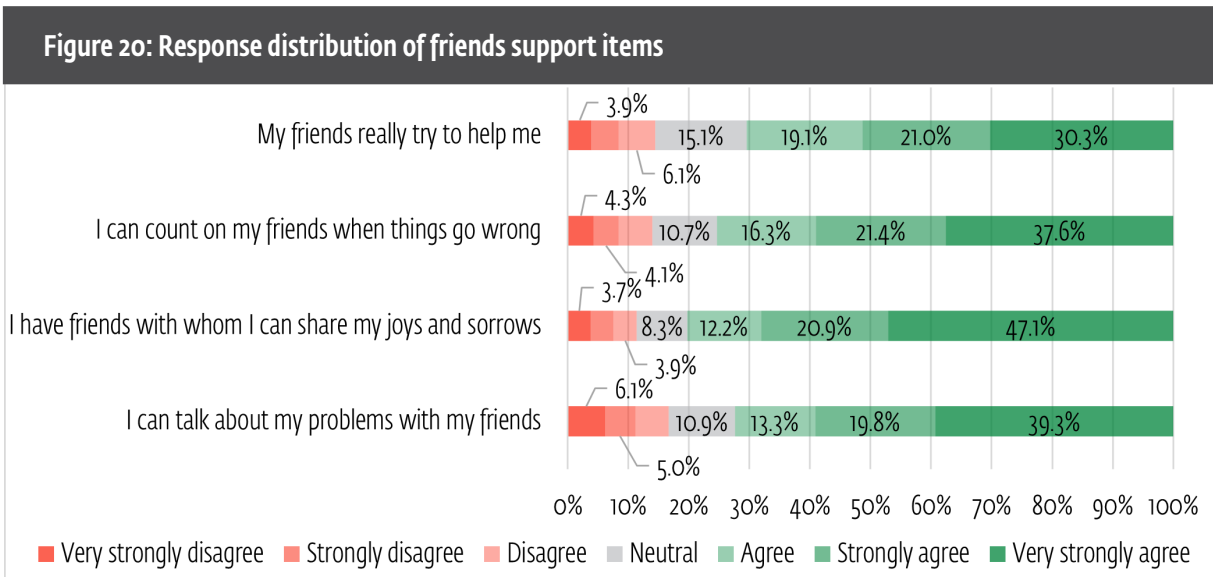


When considering the family structure, however, the results differ between mother and father communication (Figure 18 and Figure 19). Adolescents who live with both parents were more likely to report (very) easy communication with their mother than their counterparts (77.5% vs 73.0% of those living with a stepparent and 70.6% of those living with a single parent). While adolescents who live with a single parent were less prone to report a (very) easy communication with their father (50.3% vs 60.9% both parents and 57.4% stepfamily).

Moreover, adolescents with no migration background were more prone to perceive their communication with both mother (80.0%) and father (64.0%) as (very) easy, when compared with their counterparts. Although adolescents from *Enseignement Fondamental* presented a higher prevalence of (very) easy communication with their mother (84.7%) and father (70.1%), this difference may be linked to the age as 84.8% and 70.0% of the 11-12 years old adolescents reported (very) easy communication with their mother and father, respectively (for comprehensive details, see appendix, Figure 32 and Table 10, Figure 33 and Table 11). This age pattern is congruent with previous surveys (Health Behaviour in School-aged Children Luxembourg Study, 2023).

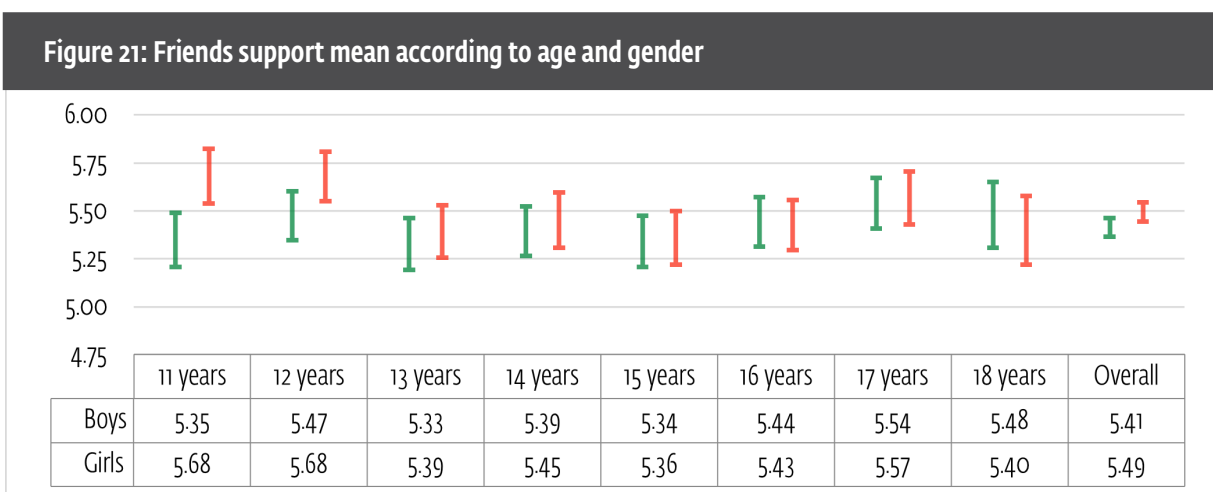
Friends support

The HBSC survey also uses the Multidimensional Scale of Perceived Social Support (MSPSS; (Zimet et al., 1988) to measure friends support. Adolescents rated four statements: "My friends really try to help me"; "I can count on my friends when things go wrong"; "I have friends with whom I can share my joys and sorrows"; "I can talk about my problems with my friends", with a 7-point Likert scale ranging from 1 ("very strongly disagree") to 7 ("very strongly agree"). As shown in Figure 20, at least 70% of the adolescents reported a positive perception of their friends in all items.



For what follows, a mean score of the four items was calculated, ranging from 1-to-7, with a higher score indicating greater support from friends. A cut-off 5.5 or more (Inchley, Currie, et al., 2023) was used to identify those with high support from their friends, resulting in 61.4% of the adolescents (see appendix, Figure 34, Table 12 and Table 13). The prevalence of youth in Luxembourg that reported high friend support in 2022 is lower compared to the 2018 rate of 67.3% (calculated using the same cut-off). A decrease in friend support was reported among the 11, 13 and 15 years old girls in Scotland, while the boys' prevalence had remained similar (Inchley, Mabelis, et al., 2023).

All the sociodemographic variables were associated with friends support. In contrast to classmate support, girls perceived slightly higher levels of friends support than boys ($M_{BOYS} = 5.41$; 95% CI [5.37, 5.46] vs $M_{GIRLS} = 5.49$; 95% CI [5.44, 5.54]). However, when age is taken into consideration (Figure 21), this gender difference remains only for adolescents aged 11 ($M_{BOYS} = 5.35$; 95% CI [5.21, 5.49] vs $M_{GIRLS} = 5.68$; 95% CI [5.54, 5.82]). This pattern is also seen in results from the 2022 HBSC England Study (Hulbert et al., 2023).



Family affluence, migration background and family composition were associated with friends support. These results are also in line with classmate support as classmate and friends support were positively correlated ($r = .303$; $p < .001$). Adolescents from high affluence ($M = 5.65$; 95% CI [5.59, 5.72]), with no migration background ($M = 5.68$; 95% CI [5.62, 5.74]) and living with both parents ($M = 5.51$; 95% CI [5.46, 5.55]) perceived a higher support from their friends compared to their respective peers. Regarding the type of school, pupils from ESG - *voie de préparation* presented the lowest support from friends when compared with most of the types of school (e.g.: $M_{VP} = 5.21$; 95% CI [5.06, 5.36] vs $M_{ESC-SUP} = 5.55$; 95% CI [5.46, 5.63]); for comprehensive details, see appendix, Figure 34, Table 12 and Table 13).

Gender identities, social support and mental health

Introduction

HBSC Studies have always reported results separately by gender, as in many other health surveys. As such, since 1983, the HBSC Study has been asking pupils if they were a boy or a girl. In 2022, the "Are you a boy or a girl?" question was asked again, and the results found in this report, as well as in the other HBSC Luxembourg Reports (Heinz et al., 2020) and International Reports (Inchley et al., 2020b) used this binary question to investigate possible gender differences. However, society and research have increasingly differentiated the biological sex and the social gender.

The sex refers to the classification based on biological and physiological characteristics, including sexual organs, chromosomes and hormones (Kaufman et al., 2023). It is often distinguished between "male" and "female" only and assigned to individuals at birth by medical professionals.

The gender, on the other hand, refers to a social construct (Kaufman et al., 2023; Manandhar et al., 2018). In other words, societal expectations for boys and girls / men and women to comply with certain social norms and roles according to their sex assigned at birth. Such constructs are learned through the socialisation processes and, for the majority of adolescents, their sex and gender do coincide (cisgender). For some individuals, however, that is not the case, as they do not identify with the gender norms corresponding to their assigned sex. Some people might identify with the opposite gender (transgender), while others feel they are neither (agender), or feel they don't belong to any gender permanently (genderfluid). Capturing gender as more than "boy" and "girl" is of extreme importance, as non-cisgender adolescents are at a higher risk to present mental health problems compared to their cisgender peers (Connolly et al., 2016).

In the present section, we have 3 aims: 1) to present the prevalence of cisgender boys, cisgender girls and non-cisgender adolescents in Luxembourg; 2) to compare the level of social support perceived by cisgender boys, cisgender girls and non-cisgender individuals and 3) to compare the life satisfaction and well-being by cisgender boys, cisgender girls and non-cisgender individuals.

Method

Population

A total of 5906 pupils attending Luxembourg public and private secondary schools only whose teaching was based on the national curriculum.

Dependent variables

Social support. Mean values of perceived support received from: family, friends, teachers, and classmates (previously presented in this report).

Well-being. Measured by the WHO-5 Well-Being Index, a five items measure, with a 0-to-5 rating scale each, adding to a sum score ranging from 0-to-25.

Life Satisfaction. Measured by the Cantril ladder, ranging from 0 ("worst possible life") to 10 ("best possible life").

Independent variables

Sex. Sex registered at birth, with two response categories: male or female.

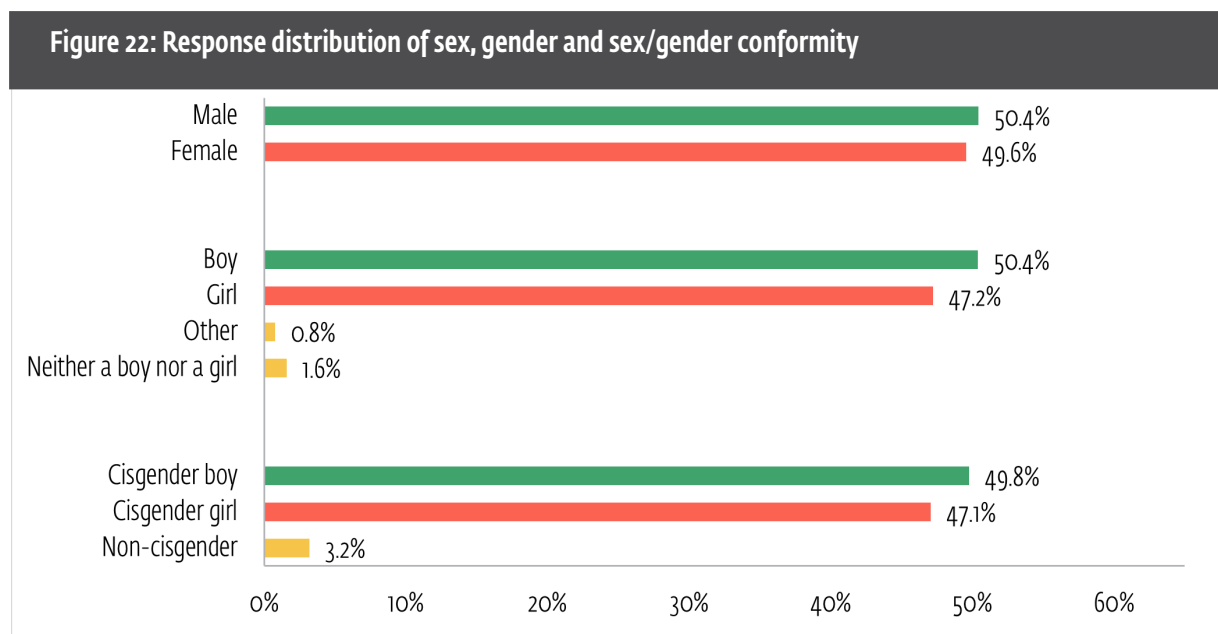
Gender. Including the following response options: "I identify myself as a boy", "I identify myself as a girl", "I identify myself as neither a boy nor a girl", "other".

Statistical analyses

To report prevalence by sex and by gender, as well as the prevalence of cisgender boys, cisgender girls and non-cisgender individuals, descriptive analyses were performed. In addition, to compare the means value of social support (family, friends, teachers and classmates) and mental health indicators (life satisfaction and well-being) between the abovementioned groups, one-way analysis of variance (ANOVA) with pairwise comparisons were performed. The level of statistical significance for all the tests was .05.

Results and discussion

Our first goal was to report on the prevalence of cisgender boys, cisgender girls and non-cisgender adolescents in Luxembourg. In order to achieve it, adolescents answered about their sex and gender. As it can be seen in Figure 22, from the secondary school pupils who participated in the survey, 50.4% were registered as male and 49.6% as female. In relation to gender, 50.4% identified as a boy (cis and trans), 47.2% as a girl (cis and trans), 1.6% as agender (neither a boy nor a girl) and 0.8% as other (including, but not limited to, gender fluid).



Although the prevalence of those who were registered as a male and identify as a boy are similar, the individuals in both groups do not necessarily fully match. The answers related to sex and gender were combined and the following categories were created: cisgender boy (pupils who were registered at birth as male and identify as a boy), corresponding to 49.8%; cisgender girls (pupils who were registered at birth as female and identify as a girl), corresponding to 47.1% and; non-cisgender (all others), corresponding to 3.2% of the participating adolescents.

In the German Health Update (GEDA 2019/2020-EHIS) study, 0.62% of the respondents indicated they were not cisgender (Pöge et al., 2022). In the LGBT+ Pride 2021 Global Survey (IPSOS, 2021) 3% of Germans, 1% of French and 1% of Belgians self-identified as non-cisgender. It is important to notice that in both cases the age range was different (participants were aged 15 and over, in the first study and aged 16 to 74, in the second). Globally, this prevalence increases within the youngest generation. For instance in the LGBT+ Pride 2021 Global Survey (IPSOS, 2021), those who self-identified as non-cisgender were less than 1% within the Baby Boomers (born between 1946 and 1964), 1% within Gen X (born between 1965 and 1980), 2% within Millennials (born between 1981 and 1996) and 4% within Gen Z (born in 1997 or after).

To our knowledge, no official data from Luxembourg is available regarding the prevalence of non-binary gender. Using the STATEC (National Institute of statistics and economic studies of the Grand Duchy of Luxembourg) research tool, key words such as "intersex", "non-binary" and "agender" show no result at all (<https://statistiques.public.lu/>, research done in January/2024). Suggesting that the binary conception of gender is still in force.

Although changing one's gender status and first name(s) in the civil register is a possibility in Luxembourg since 2018 (Loi du 10 août 2018 relative à la modification de la mention du sexe et du ou des prénoms à l'état civil et portant modification du Code civil, 2018) a third option of the gender status appears necessary. Many countries already legally recognise non-binary or third gender classifications. In Germany, since 2018, it is possible to choose between "male", "female", "diverse" and "no gender marker" in the civil register (*Beschluss in der Personenstandssache*, 22 April 2020; Gesetz zur Änderung der in das Geburtenregister einzutragenden Angaben, 2018).

Subsequently, we aimed to compare the level of social support, life satisfaction and well-being perceived by cisgender boys, cisgender girls and non-cisgender individuals. It is important to note that the mean values presented in this section for cisgender boys and cisgender girls differ from the values presented in the previous section of this report and in the Mental health and well-being of school-aged children in Luxembourg Report (Catunda, Mendes, Lopes Ferreira, & Residori, 2023). That is because (1) non-cisgender participants who answered to be a boy or a girl were taken into consideration as such in the binary analyses previously performed and (2) only secondary pupils respond to the sex and gender identity questions presented here.

In the school context, non-cisgender adolescents reported significantly lower ($p < .01$) means of perceived teacher and classmate support (Figure 23; $M_{\text{non-cisgender}} = 3.03$, 95% CI [2.89, 3.18] and $M_{\text{non-cisgender}} = 3.47$, 95% CI [3.34, 3.60], respectively) compared to their cisgender peers (for comprehensive details, see the appendix Table 14).

Non-cisgender adolescents also presented the lowest ($p < .01$) level of family and friends support (Figure 24; $M_{\text{non-cisgender}} = 5.05$, 95% CI [4.78, 5.32] and $M_{\text{non-cisgender}} = 3.73$, 95% CI [3.45, 4.01], respectively). However, the difference between groups in the perception of their family support is larger than the differences in friends support.

The third objective of this section was to compare the levels of life satisfaction and well-being among cisgender boys, cisgender girls, and non-cisgender individuals. Figure 25 and Figure 26 presents the results of their mean life satisfaction and well-being, respectively. Non-cisgender individuals exhibited significantly lower levels ($p < .01$) of life satisfaction ($M = 5.66$, 95% CI [5.33, 5.98]) and well-being ($M = 9.92$, 95% CI [9.11, 10.73]) compared to their cisgender peers (for comprehensive details, see the appendix Table 14 and Table 15).

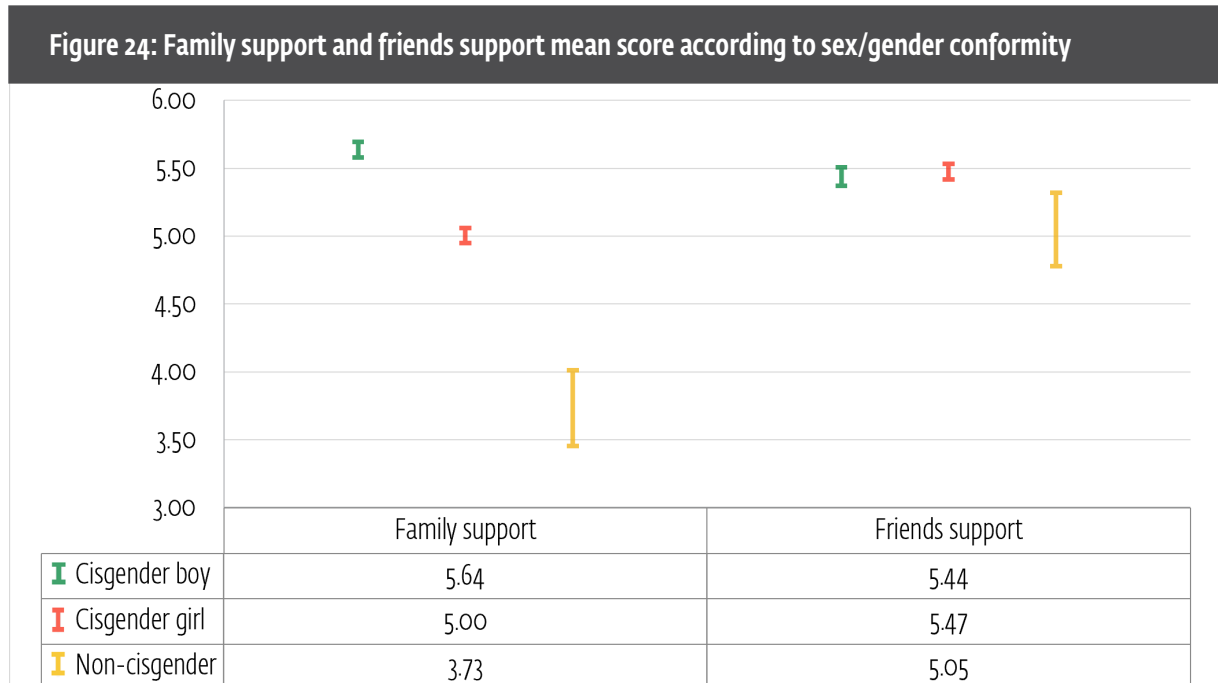
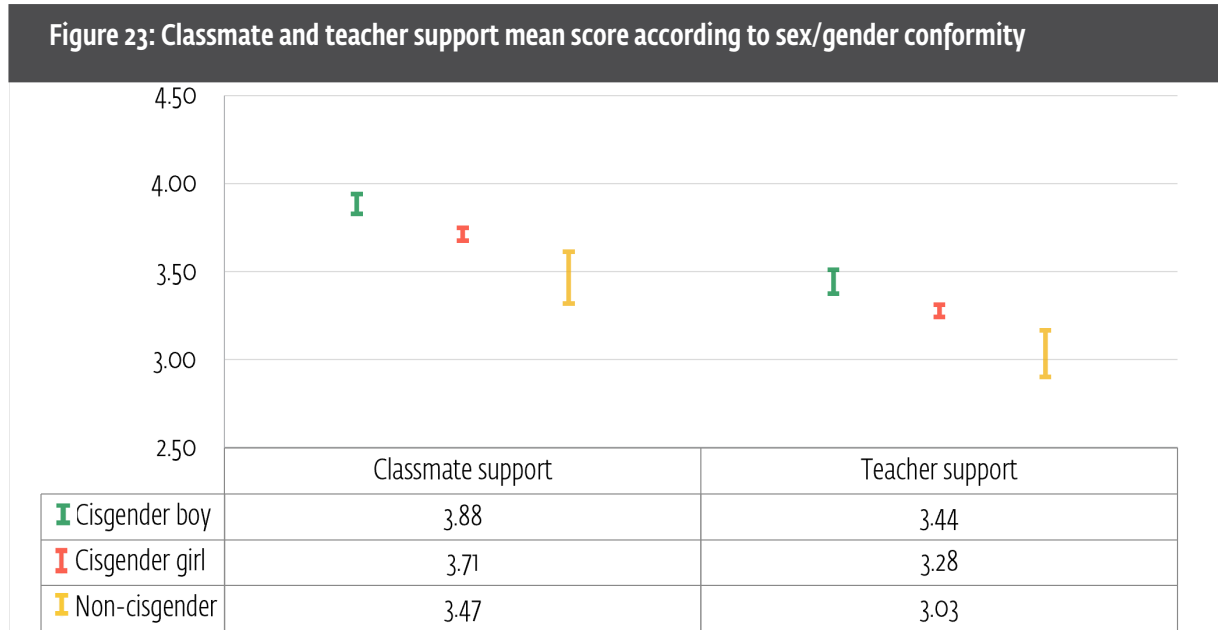


Figure 25: Life satisfaction mean score according to sex/gender conformity

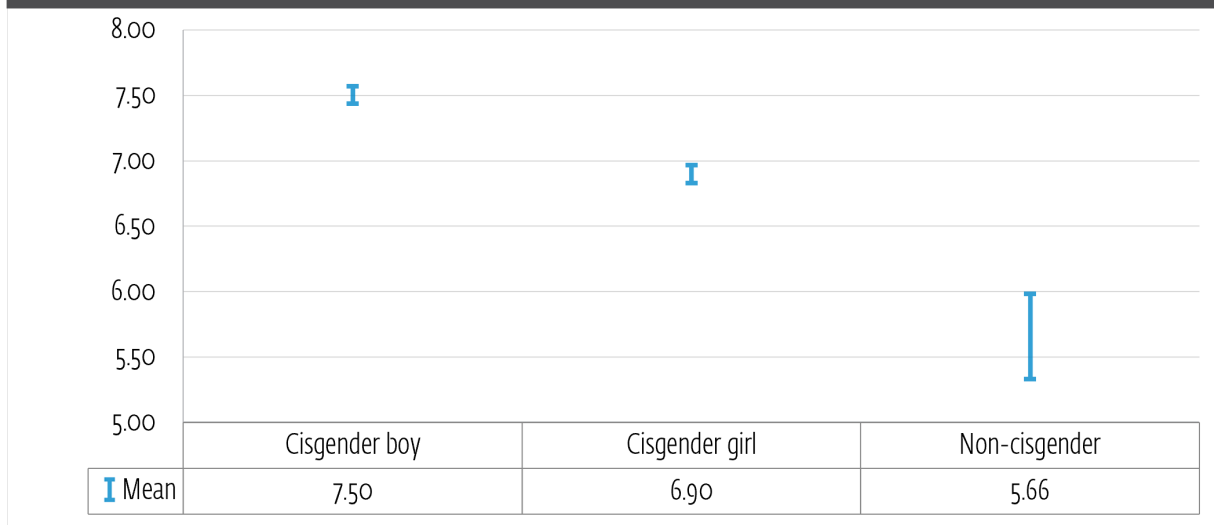
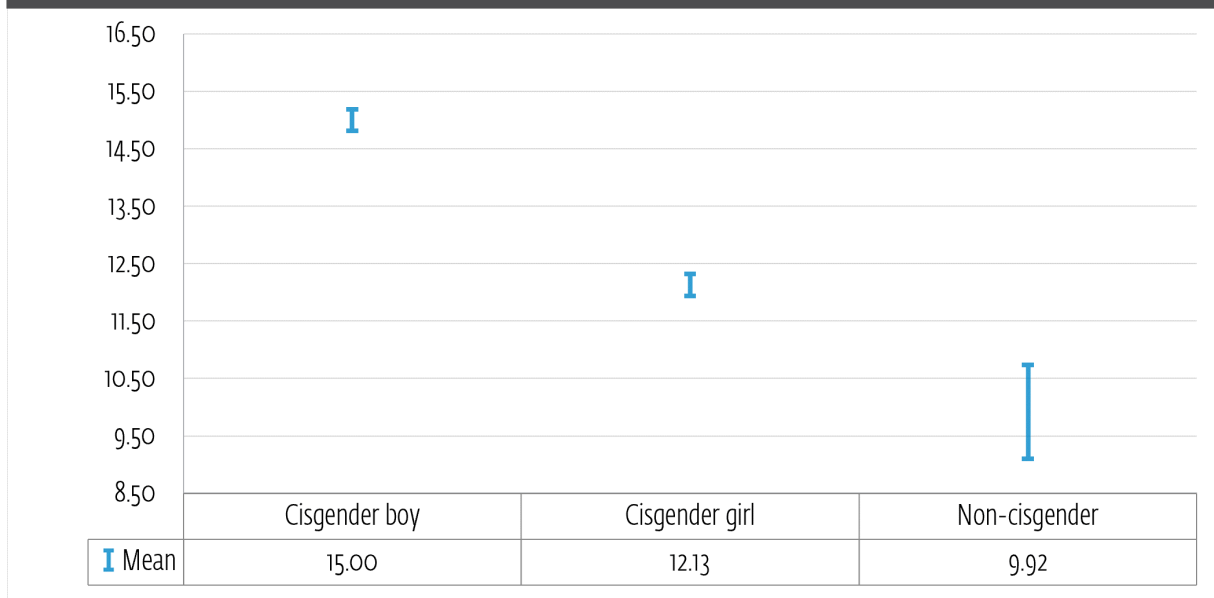


Figure 26: Well-being mean score according to sex/gender conformity



In sum, non-cisgender adolescents in Luxembourg reported worse social support and lower levels of mental health compared to their cisgender peers. Those findings are in line with the international literature. Studies have shown that non-cisgender youth compared to their cisgender peers were more likely to feel rejected by the school staff (teachers, nurses, counsellor, etc.; Grossman & D'Augelli, 2007), to experience worst teacher relationship (Eisenberg et al., 2017) and to perceive less family support (Clark et al., 2014; Eisenberg et al., 2017), with fathers being considered the least supportive family members (Grossman & D'Augelli, 2007).

It is important to highlight that family, friends, teachers and classmates are the people towards whom they should turn to for assistance in case of need. Non-cisgender adolescents face many challenges in relation to vulnerability and risk factors, as well as societal discriminatory attitudes and behaviours (McCann & Brown, 2018; Reisner et al., 2015), being more likely to be physically assaulted, suffer verbal abuse (Grossman & D'Augelli, 2007) and be bullied and harassed (Eisenberg et al., 2017; Reisner et al., 2015). Non-cisgender adolescents have also an increased risk of experiencing more psychological distress, depressive symptoms, self-harm and suicide attempts (Clark et al., 2014; Eisenberg et al., 2017; Grossman & D'Augelli, 2007; Jones & Hillier, 2013; Veale et al., 2017). While the aforementioned factors negatively influence their mental health (Eisenberg et al., 2017), having a high social support could be a protective factor (Clark et al., 2014; Eisenberg et al., 2017). If non-cisgender youth don't feel enough social support, it is possible that they could feel socially isolated and lonely, which, in turn, could affect their mental health, as observed in the Mental health and well-being of school-aged children in Luxembourg Report (Catunda, Mendes, Lopes Ferreira, & Residori, 2023). Although in this report non-cisgender adolescents were included in one category, there are studies that reported differences among the non-cisgenders (Eisenberg et al., 2017; Toomey et al., 2018). Future research is needed to explore the differences within non-cisgenders adolescents.

The EU LGBTI Survey Report (European Union Agency for Fundamental Rights, 2020) includes individuals aged 15 to more than 55 years old who describe themselves as lesbian, gay, bisexual, trans or intersex. Luxembourg was one of the countries with the lowest proportion of individuals who reported hate-motivated harassment and the avoidance of certain behaviours due to fearing negative consequences. Conversely, it was also one of the countries with the highest proportion of individuals who informed others when felt discriminated. Nevertheless, it was one of the countries with the lowest proportion of awareness of organisations that can offer support or advice to victims of discrimination. Following the aforementioned report, the Ministry of Family Affairs, Integration and the Greater Region and the Committee for the Diversity Charter *Lëtzebuerg* published a guideline for the inclusion of transgender people in the workplace (Committee for the Diversity Charter *Lëtzebuerg* & IMS Luxembourg, 2022).

Conclusions and perspectives

Adolescence is a crucial period in human development, and social interactions and relationships are significant throughout this process (Collins & Steinberg, 2008; Lenzi et al., 2012; Moore et al., 2018; Ragelienė, 2016), with school and home being the primary environments for their social lives (World Health Organization, 2014; World Health Organization & UNESCO, 2018). School plays a crucial role in the socialisation process. In this context, teachers and classmates can be both a source of stress or of social support for the students (Lassarre, 2001). In addition, positive relations with family and friends are also an important source of support. Having a supportive environment can play a protective role against depression, substance use, (cyber)bullying involvement and externalised behaviours (Camerini et al., 2020; Carver et al., 2017; Gariépy et al., 2016; José Antonio Ruiz-Hernández et al., 2018; Zych et al., 2019).

The HBSC Luxembourg 2022 reports (Catunda et al., 2024; Catunda, Mendes, Lopes Ferreira, & Residori, 2023; Mendes et al., 2024) have focused on mental health and well-being and specific behaviours (health and risk), while the present report explored the adolescents' social context, particularly, school experiences (school satisfaction, schoolwork pressure, school performance, support from classmates and teacher), communication with parents and family and friends support.

In general, boys and younger adolescents reported better school experiences (low schoolwork pressure and high support from teachers and classmates). A negative association between school satisfaction and schoolwork pressure was found. Most pupils who reported to like school a lot reported to feel less pressured by schoolwork. Both variables presented a similar sociodemographic distribution. In both cases, pupils from families with low affluence, first-generation migrants and those attending *Enseignement Fondamental* were the most likely to like school a lot and to feel pressure (little or) no pressure. Moreover, most pupils who thought that their teacher(s) considered their school performance below average were more prone to report not liking school and feeling pressured by schoolwork.

Perceived support from teachers and classmates varied differently according to family affluence and structure, migration background and type of school. For instance, higher perception of support from their classmates was reported by adolescents from high affluence families and with no migration background, while adolescents from high affluence families and second-generation of migration were less likely to report high support from their teachers. Additionally, pupils that were attending *Enseignement Fondamental* reported the highest support from both classmates and teachers, while *Formation professionnelle* and ESC also reported high levels of classmate support.

Comparing the results with the previous wave (2018; Health Behaviour in School-aged Children Luxembourg Study, 2023; Heinz et al., 2020) most indicators deteriorated. In 2022, there was an increase of the adolescents who didn't like school and felt schoolwork pressure. There was also a decrease of those who perceived a high classmate support. The prevalence of pupils reporting high teacher support remained stable. These patterns were also found among the adolescents aged 11, 13 and 15 in England, Italy, Portugal, Scotland and Sweden (Folkhälsomyndigheten, 2023; Gaspar et al., 2022; Gruppo HBSC-Italia 2022, 2023; Hulbert et al., 2023; Inchley, Mabelis, et al., 2023), however further studies are needed to explore the cross-national differences between the European countries.

Social inequalities in adolescent's school experiences observed in 2018 in relation to family affluence and migration background continued in 2022, both in Luxembourg and internationally (Heinz et al., 2020; Inchley et al., 2020a, 2020b). Luxembourg has a higher rate of migration than the border countries (Klein & Peltier, 2023). It is also one of the European countries with the highest increase of 15 years old migrant pupils from 2009 to 2018 (Givord & Schwabe, 2019). As abovementioned, the first-generation of migration stated more frequently liking school a lot and feeling no schoolwork pressure, while natives perceived better support and communication with parents, friends, classmates and teachers. Despite the results being consistent with 2018 survey (Heinz et al., 2020), a cross-national study with 41 countries showed that most of the native reported a higher sense of belonging at school than their counterparts with migration background (Chiu et al., 2012). Furthermore, research with Portuguese immigrants in Luxembourg has shown that adults first- and second-generation stated different senses of belonging to Luxembourg (Afonso et al., 2023). For example, the adult migrants who were born in Luxembourg perceived less difficulties to adjust to the Luxembourgish culture and language, while the older ones that migrated to Luxembourg also felt the sense of belonging, but they did not experience a strong attachment to culture. Hence, there is a need of further research to understand the migration role in the adolescent's school experiences.

Considering the adolescents' relations with family and friends, younger adolescents, those from high affluence families, living with both parents and who didn't have migration background perceived higher support from their family and friends. Boys reported higher levels of family support, while girls reported higher levels of friends support. Pupils attending *Enseignement Fondamental* and *ESC- classes inférieures* perceived higher family support, while the pupils from *ESC- classes inférieures (VP)* reported lower levels of support from friends. Comparing to the 2018 survey (Health Behaviour in School-aged Children Luxembourg Study, 2023; Heinz et al., 2020), the prevalence of adolescents who reported high family and friends support decreased. Similar results were found among the adolescents aged 11, 13, 15 in Scotland and Portugal (Gaspar et al., 2022; Inchley, Mabelis, et al., 2023).

Focusing on communication with parents, adolescents in Luxembourg reported more often an (very) easy communication with their mother than with their father. Although boys were more prevalent to report an (very) easy communication with both mother and father than girls, the gender difference is more prominent on the communication with the father than with the mother. Adolescents that live with a single parent were more prevalent reporting (very) difficult communication with their father and those from low affluence reported more often to have a (very) difficult communication with both their mother and father. From 2018 to 2022, the perception of an (very) easy communication with both their father and mother remained rather stable (Health Behaviour in School-aged Children Luxembourg Study, 2023). The gender gap in those reporting an easy communication with their mother has, however, increased, reflective of a small increase in the prevalence of boys reporting it and a decrease in the proportion of girls. Regarding other European countries, there was a variability in the patterns of family communication among the adolescents 11, 13 and 15 years (Folkhälsomyndigheten, 2023; Hulbert et al., 2023; Inchley, Mabelis, et al., 2023).

Additionally in this report, analyses were conducted to specifically explore the relation between gender identities (including boys, girls and adolescents who are non-binary) and social support and mental well-being. Secondary pupils only responded to the questions in relation to sex and gender identity, and 3.2 % reported to be non-cisgender. Overall, they indicated worse social support (from family, friends, teachers and classmates), and lower levels of mental health (life satisfaction and well-being) compared to their cisgender peers. Social support is a protective factor for their mental health. Therefore, a supportive environment should be promoted for this vulnerable group. Although our research is one of the first to survey non-cisgender adolescents in school in Luxembourg, it is clear that school and

field practitioners in the country were already conscious about the challenges this group faces and concerned about their mental health. For instance, at an individual level, the CePAS (*Centre psycho-social et d'accompagnement scolaires*) already offers intervention groups for transgender children and their parents, based on the understanding that their reality can be marked by rejection, discrimination, incomprehension, harassment, school drop-outs and high suicidality (<https://cepas.public.lu/fr/consultations-psycho-sociales/activites-groupe-prevention/transgender.html>). Our findings are in line with the scientific literature and highlight the need of educational programs for those in contact with non-cisgender youth in order to create a more supportive environment for this vulnerable population. To our knowledge, such programs are still lacking in of Luxembourg.

Throughout the present report, the adolescents' social contexts and relationships have been constantly highlighted due to their importance in the adolescents' development. School is a valuable social context to promote a healthy adolescence. Moreover, it is a key context to implement universal and/or targeting intervention programmes to promote physical and mental health and well-being (e.g. Langford et al., 2015; Onrust et al., 2016; Tejada-Gallardo et al., 2020). Adolescents who like school have higher chances to reflect and discuss school-based interventions with their parents and follow nurse's advice (Borup & Holstein, 2006). Likewise, it is worth highlighting the positive effects of pupils' participation during the different phases of the health promotion programs (designing, planning, implementing and/or evaluating; Griebler et al., 2017). Accordingly, the WHO and UNESCO health-promoting school approach advise to involve and strengthen the participation between government and stakeholders, school resources and infrastructure, school curriculum, school health services, pupils, parents and caregivers and the community (World Health Organization & UNESCO, 2021). The abovementioned approach also reinforces the need to monitor and evaluate the implementation of the interventions.

In Luxembourg the "Plan d'action national pour la jeunesse 2022-2025" defined the following areas as priorities: the promotion of well-being at school, within youth structures and in socio-educational organisations (such as non-formal education) and the increase of youth participation and contact with the psycho-socio-educational partners (Ministère de l'Éducation nationale, de l'Enfance et de la Jeunesse, 2022a). Throughout the years, parental and youth participation have been developed at several levels, such as in class (students and parents representatives, class councils), formal and informal education (student committees, parent representatives, *Kannerbureau Wooltz*) as well as national level (*Conseil supérieur de l'éducation nationale*; Ministère de l'Éducation nationale, de l'Enfance et de la Jeunesse, 2022b). In addition, the *Centre psycho-social et d'accompagnement scolaires* (CePAS) in collaboration with the *Service psycho-sociaux et d'accompagnement scolaires* (SePAS) developed interventions that intend to promote a positive climate at school and classroom, the inclusion of students and the prevention of school dropout (<https://cepas.public.lu/fr/accompagnement-scolaire/prevention.html>).

Adolescents' relations with their family (and more specifically with their parents) and friends are known to influence adolescents' health and risk behaviours. For instance, a good relation between parents and adolescents plays a key role in preventing substance use, as it is possible for them to talk about the health risks and consequences in consuming substances (Carver et al., 2017). In Luxembourg, programs and individual interventions to encourage family communication and relationship are promoted by several organisations and foundations such as *arcus Kanner, Jugend a Famill* (<https://www.arcus.lu/28/familljenhaus>), *Fondation Kannerschlass* (<https://www.kannerschlass.lu/>) and *Fondation Pro Familia* (<https://www.profamilia.lu/>). While friends can play a role in adolescents' substance use due to pressure, influence or social norms (Cheetham & Lubman, 2017), their influence can also be addressed in positive ways. For example, through peers education, peers can also teach, share and discuss about the negative effects of

substance use in an (in)formal context. The use of peers-led education has been successfully used in multiple contexts, such as to promote sex education, HIV prevention and healthy lifestyles (Dodd et al., 2022).

Appendix

School satisfaction

Figure 27: Prevalence of liking school according to sociodemographic groups

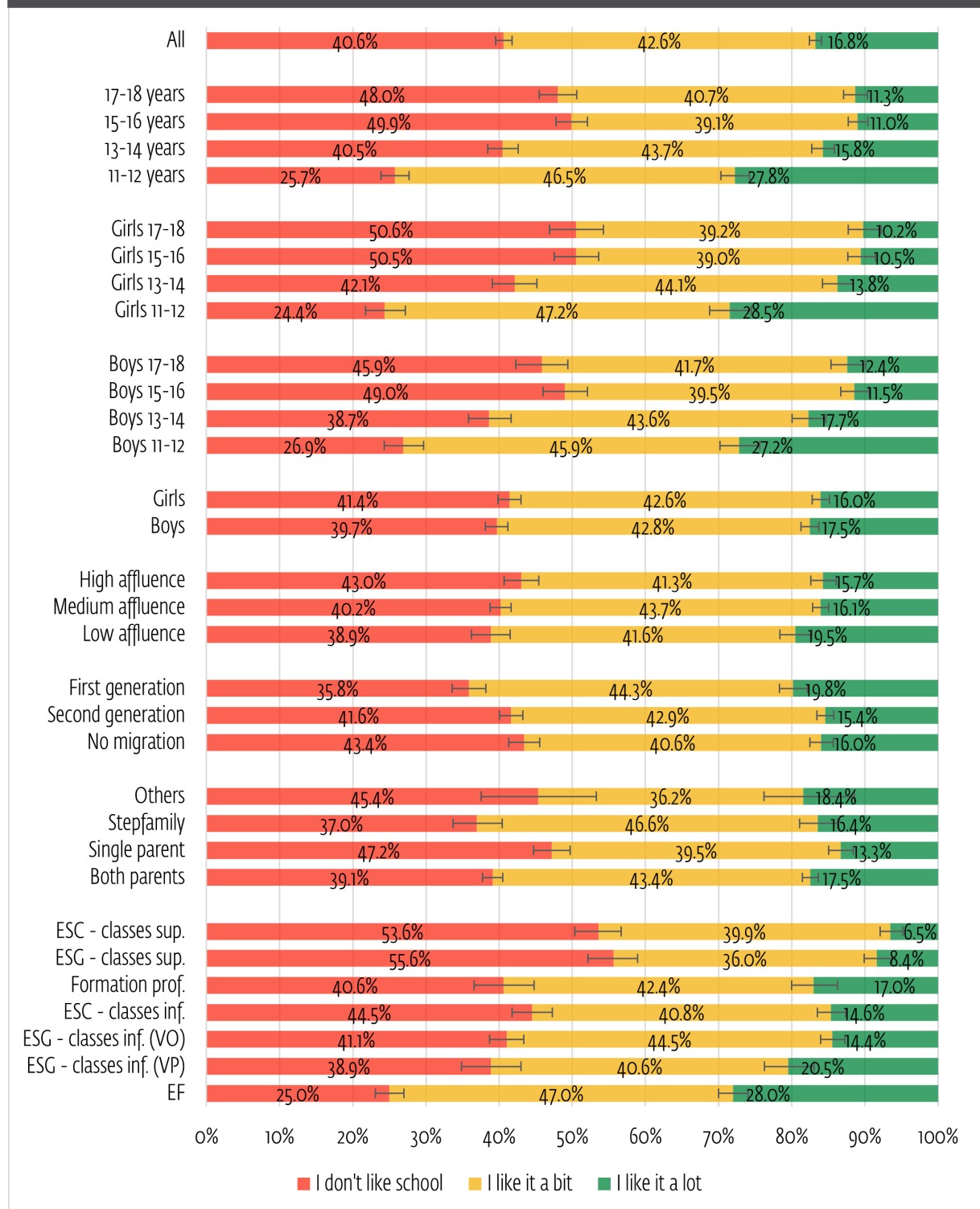


Table 2: Prevalence of liking school according to sociodemographic groups

	I don't like (3-4)	I like it a bit (2)	I like it a lot (1)	Chi square test
All				N = 7 654
	40.6 (39.5 - 41.7)	42.6 (41.5 - 43.7)	16.8 (15.9 - 17.6)	
Age				N = 7 654
11-12 years	25.7 (23.9 - 27.7)	46.5 (44.4 - 48.7)	27.8 (25.8 - 29.7)	
13-14 years	40.5 (38.4 - 42.6)	43.7 (41.6 - 45.9)	15.8 (14.2 - 17.4)	p < .001
15-16 years	49.9 (47.8 - 52.1)	39.1 (37.0 - 41.2)	11.0 (9.7 - 12.4)	$\gamma = -.261$
17-18 years	48.0 (45.5 - 50.6)	40.7 (38.2 - 43.2)	11.3 (9.8 - 13.0)	
Age x Gender				N = 3 727
Girls 11-12	24.4 (21.8 - 27.2)	47.2 (44.1 - 50.4)	28.5 (25.7 - 31.4)	
Girls 13-14	42.1 (39.1 - 45.2)	44.1 (41.0 - 47.2)	13.8 (11.7 - 15.9)	p < .001
Girls 15-16	50.5 (47.5 - 53.6)	39.0 (36.1 - 42.0)	10.5 (8.7 - 12.5)	$\gamma = -.291$
Girls 17-18	50.6 (46.9 - 54.2)	39.2 (35.6 - 42.8)	10.2 (8.2 - 12.6)	
				N = 3 876
Boys 11-12	26.9 (24.3 - 29.7)	45.9 (42.8 - 48.9)	27.2 (24.6 - 30.0)	
Boys 13-14	38.7 (35.8 - 41.6)	43.6 (40.6 - 46.6)	17.7 (15.5 - 20.1)	p < .001
Boys 15-16	49.0 (46.0 - 52.1)	39.5 (36.5 - 42.5)	11.5 (9.6 - 13.5)	$\gamma = -.236$
Boys 17-18	45.9 (42.3 - 49.4)	41.7 (38.2 - 45.3)	12.4 (10.2 - 14.9)	
Gender				N = 7 603
Girls	41.4 (39.9 - 43.0)	42.6 (41.0 - 44.1)	16.0 (14.9 - 17.2)	p = .133
Boys	39.7 (38.1 - 41.2)	42.8 (41.2 - 44.3)	17.5 (16.4 - 18.8)	Cramér's V. = .023
Family affluence				N = 7 438
High	43.0 (40.7 - 45.4)	41.3 (38.9 - 43.6)	15.7 (14.0 - 17.5)	
Medium	40.2 (38.8 - 41.7)	43.7 (42.3 - 45.2)	16.1 (15.0 - 17.2)	p = .004
Low	38.9 (36.2 - 41.5)	41.6 (38.9 - 44.3)	19.5 (17.5 - 21.8)	$\gamma = -.052$
Migration background				N = 7 381
First generation	35.8 (33.5 - 38.2)	44.3 (41.9 - 46.7)	19.8 (17.9 - 21.8)	
Second generation	41.6 (40.0 - 43.2)	42.9 (41.4 - 44.6)	15.4 (14.3 - 16.6)	p < .001
No migration	43.4 (41.3 - 45.6)	40.6 (38.5 - 42.7)	16.0 (14.4 - 17.6)	Cramér's V. = .046
Family structure				N = 7 229
Others	45.4 (37.5 - 53.3)	36.2 (28.6 - 43.9)	18.4 (13.1 - 25.5)	
Stepfamily	37.0 (33.7 - 40.4)	46.6 (43.1 - 50.1)	16.4 (14.0 - 19.1)	p < .001
Single parent	47.2 (44.7 - 49.7)	39.5 (37.1 - 42.0)	13.3 (11.7 - 15.0)	Cramér's V. = .055
Both parents	39.1 (37.7 - 40.5)	43.4 (42.0 - 44.8)	17.5 (16.4 - 18.6)	
Type of school				N = 7 654
ESC – classes sup.	53.6 (50.4 - 56.7)	39.9 (36.8 - 43.1)	6.5 (5.1 - 8.3)	
ESG – classes sup	55.6 (52.1 - 58.9)	36.0 (32.8 - 39.4)	8.4 (6.7 - 10.5)	
Formation prof.	40.6 (36.6 - 44.8)	42.4 (38.4 - 46.6)	17.0 (14.0 - 20.2)	
ESC – classes inf.	44.5 (41.8 - 47.3)	40.8 (38.2 - 43.6)	14.6 (12.7 - 16.7)	p < .001
ESG – classes inf. (VO)	41.1 (38.7 - 43.4)	44.5 (42.2 - 46.9)	14.4 (12.8 - 16.2)	Cramér's V. = .175
ESG – classes inf. (VP)	38.9 (34.9 - 43.0)	40.6 (36.6 - 44.8)	20.5 (17.2 - 24.0)	
EF	25.0 (23.1 - 27.0)	47.0 (44.7 - 49.2)	28.0 (26.0 - 30.0)	

Respondents were asked how they feel about school at the present. The answer options ranged from "I like it a lot" (1) to "I don't like it at all" (4). Liking school was categorised in: I don't like school (categories 3 and 4), I like it a bit (categories 2) and I like it a lot (categories 1). The results are in % (95% Confidence Interval).

Schoolwork pressure

Figure 28: Prevalence of schoolwork pressure according to sociodemographic groups

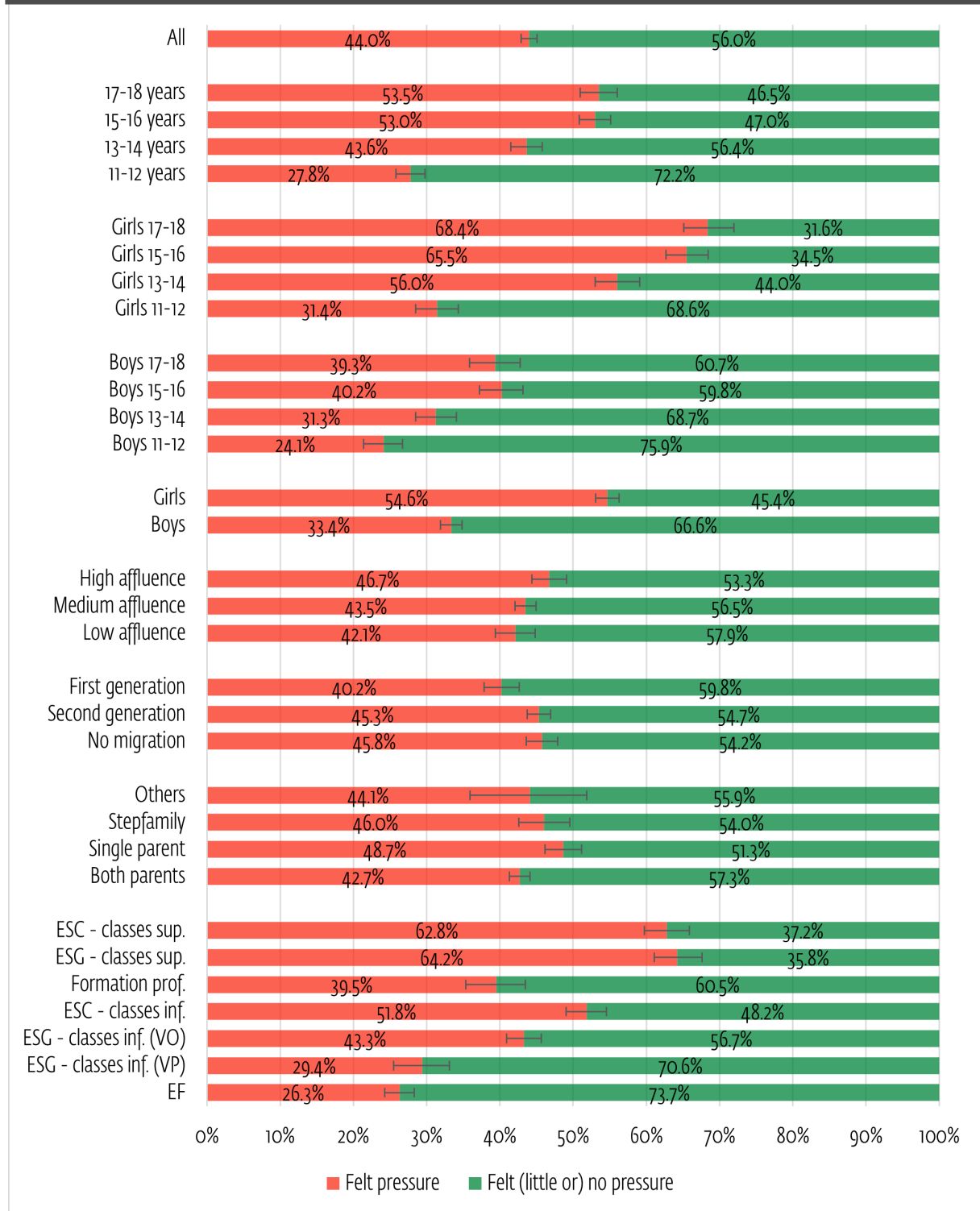


Table 3: Prevalence of school pressure according to sociodemographic groups

	Felt pressure (3-4)	Felt (little or) no pressure (1-2)	Chi square test
All			N = 7 646
	44.0 (42.9 - 45.1)	56.0 (54.9 - 57.1)	
Age			N = 7 646
11-12 years	27.8 (25.9 - 29.8)	72.2 (70.2 - 74.1)	
13-14 years	43.6 (41.5 - 45.8)	56.4 (54.2 - 58.5)	$p < .001$
15-16 years	53.0 (50.8 - 55.1)	47.0 (44.9 - 49.1)	$\gamma = .292$
17-18 years	53.5 (51.0 - 56.0)	46.5 (43.9 - 49.0)	
Age x Gender			N = 3 729
Girls 11-12	31.4 (28.5 - 34.3)	68.6 (65.7 - 71.5)	
Girls 13-14	56.0 (53.0 - 59.1)	44.0 (40.9 - 47)	$p < .001$
Girls 15-16	65.5 (62.5 - 68.3)	34.5 (31.7 - 37.5)	$\gamma = .397$
Girls 17-18	68.4 (64.9 - 71.7)	31.6 (28.3 - 35.1)	
			N = 3 864
Boys 11-12	24.1 (21.6 - 26.8)	75.9 (73.2 - 78.4)	
Boys 13-14	31.3 (28.6 - 34.2)	68.7 (65.9 - 71.5)	$p < .001$
Boys 15-16	40.2 (37.3 - 43.3)	59.8 (56.7 - 62.7)	$\gamma = .208$
Boys 17-18	39.3 (35.9 - 42.9)	60.7 (57.1 - 64.1)	
Gender			N = 7 593
Girls	54.6 (53.1 - 56.2)	45.4 (43.8 - 47.0)	$p < .001$
Boys	33.4 (31.9 - 34.9)	66.6 (65.1 - 68.1)	Cramér's V. = .214
Family affluence			N = 7 436
High	46.7 (44.4 - 49.1)	53.3 (50.9 - 55.6)	
Medium	43.5 (42.0 - 44.9)	56.5 (55.1 - 58.0)	$p = .008$
Low	42.1 (39.4 - 44.9)	57.9 (55.1 - 60.6)	$\gamma = .056$
Migration background			N = 7 375
First generation	40.2 (37.9 - 42.7)	59.8 (57.4 - 62.2)	
Second generation	45.3 (43.7 - 46.9)	54.7 (53.1 - 56.3)	$p < .001$
No migration	45.8 (43.6 - 47.9)	54.2 (52.1 - 56.4)	Cramér's V. = .044
Family structure			N = 7 216
Others	44.1 (36.4 - 52.3)	55.9 (47.7 - 63.6)	
Stepfamily	46.0 (42.5 - 49.5)	54.0 (50.5 - 57.5)	$p < .001$
Single parent	48.7 (46.2 - 51.1)	51.3 (48.9 - 53.8)	Cramér's V. = .050
Both parents	42.7 (41.3 - 44.1)	57.3 (55.9 - 58.7)	
Type of school			N = 7 646
ESC – classes sup.	62.8 (59.6 - 65.8)	37.2 (34.1 - 40.3)	
ESG – classes sup	64.2 (61.0 - 67.5)	35.8 (32.6 - 39.2)	
Formation prof.	39.5 (35.5 - 43.7)	60.5 (56.3 - 64.5)	
ESC – classes inf.	51.8 (49.0 - 54.6)	48.2 (45.3 - 50.9)	$p < .001$
ESG – classes inf. (VO)	43.3 (40.9 - 45.6)	56.7 (54.4 - 59.1)	Cramér's V. = .278
ESG – classes inf. (VP)	29.4 (25.7 - 33.3)	70.6 (66.7 - 74.3)	
EF	26.3 (24.3 - 28.4)	73.7 (71.6 - 75.7)	

Respondents were asked how pressured they feel by the schoolwork they have to do. The answer options ranged from "not at all" (1) to "a lot" (4). Schoolwork pressure was categorised in: felt pressured (categories 3 and 4) and felt (little or) no pressured (categories 1 and 2). The results are in % (95% Confidence Interval).

Teacher support

Figure 29: Prevalence of teacher support according to sociodemographic groups

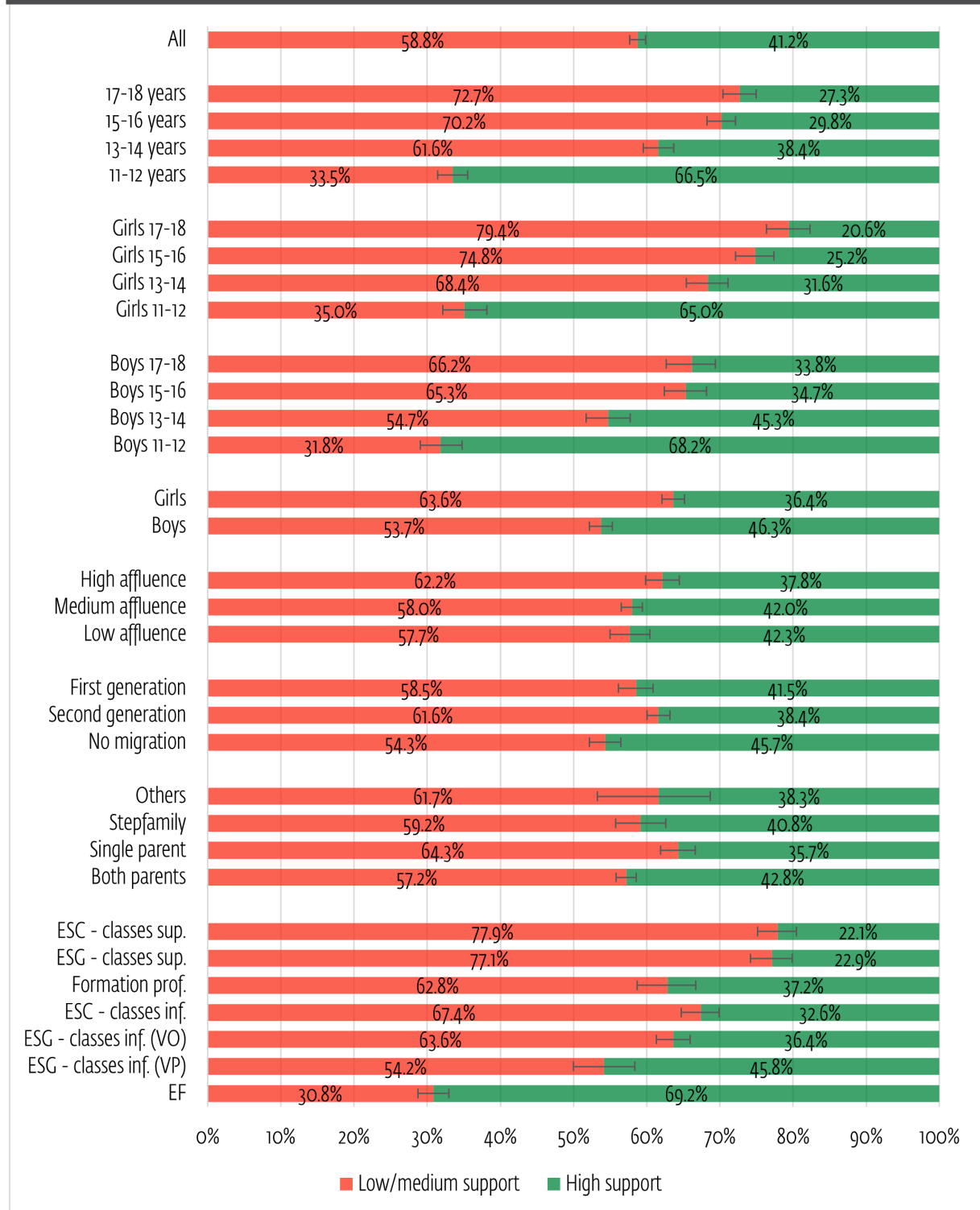


Table 4: Prevalence of teacher support according to sociodemographic groups

	Low/medium support	High support	Chi square test
All			N = 7 666
	58.8 (57.7 - 59.9)	41.2 (40.1 - 42.3)	
Age			N = 7 666
11-12 years	33.5 (31.4 - 35.5)	66.5 (64.5 - 68.6)	
13-14 years	61.6 (59.5 - 63.7)	38.4 (36.4 - 40.5)	$p < .001$
15-16 years	70.2 (68.2 - 72.1)	29.8 (27.8 - 31.7)	$\gamma = -.427$
17-18 years	72.7 (70.4 - 75.0)	27.3 (25.0 - 29.6)	
Age x Gender			N = 3 747
Girls 11-12	35.0 (32.1 - 38.1)	65.0 (61.9 - 67.9)	
Girls 13-14	68.4 (65.4 - 71.1)	31.6 (28.9 - 34.6)	$p < .001$
Girls 15-16	74.8 (72.1 - 77.4)	25.2 (22.6 - 27.9)	$\gamma = -.485$
Girls 17-18	79.4 (76.4 - 82.3)	20.6 (17.7 - 23.6)	
			N = 3 868
Boys 11-12	31.8 (29.0 - 34.7)	68.2 (65.3 - 71.0)	
Boys 13-14	54.7 (51.7 - 57.7)	45.3 (42.3 - 48.3)	$p < .001$
Boys 15-16	65.3 (62.4 - 68.2)	34.7 (31.8 - 37.6)	$\gamma = -.380$
Boys 17-18	66.2 (62.7 - 69.4)	33.8 (30.5 - 37.2)	
Gender			N = 7 615
Girls	63.6 (62.1 - 65.2)	36.4 (34.8 - 37.9)	$p < .001$
Boys	53.7 (52.2 - 55.3)	46.3 (44.7 - 47.8)	Cramér's V. = -.101
Family affluence			N = 7 455
High	62.2 (59.9 - 64.5)	37.8 (35.5 - 40.1)	$p = .006$
Medium	58.0 (56.5 - 59.4)	42.0 (40.6 - 43.5)	$\gamma = -.058$
Low	57.7 (55.0 - 60.4)	42.3 (39.7 - 45.1)	
Migration background			N = 7 413
First generation	58.5 (56.1 - 60.9)	41.5 (39.1 - 43.9)	$p < .001$
Second generation	61.6 (60.0 - 63.2)	38.4 (36.9 - 40.0)	Cramér's V. = .062
No migration	54.3 (52.2 - 56.4)	45.7 (43.5 - 47.8)	
Family structure			N = 7 259
Others	61.7 (53.3 - 68.7)	38.3 (30.7 - 46.0)	
Stepfamily	59.2 (55.8 - 62.6)	40.8 (37.5 - 44.4)	$p < .001$
Single parent	64.3 (61.9 - 66.7)	35.7 (33.4 - 38.1)	Cramér's V. = .059
Both parents	57.2 (55.8 - 58.6)	42.8 (41.4 - 44.2)	
Type of school			N = 7 666
ESC – classes sup.	77.9 (75.2 - 80.5)	22.1 (19.5 - 24.8)	
ESG – classes sup	77.1 (74.2 - 79.9)	22.9 (20.1 - 25.8)	
Formation prof.	62.8 (58.7 - 66.7)	37.2 (33.3 - 41.3)	
ESC – classes inf.	67.4 (64.7 - 69.9)	32.6 (30.1 - 35.3)	$p < .001$
ESG – classes inf. (VO)	63.6 (61.3 - 65.9)	36.4 (34.1 - 38.7)	Cramér's V. = .346
ESG – classes inf. (VP)	54.2 (50.0 - 58.4)	45.8 (41.6 - 50.0)	
EF	30.8 (28.8 - 33.0)	69.2 (67.0 - 71.2)	

Respondents were asked three items "I feel my teachers accept me as I am"; "I feel that my teachers care about me as a person"; "I feel a lot of trust in my teachers". The response options ranged from "strongly disagree" (1) to "strongly agree" (5). The overall score is the mean of the three items. classmate support was categorised in: low/medium support (mean < 4) and high support (mean \geq 4). The results are in mean (95% Confidence Interval).

Table 5: Means of teacher support according to sociodemographic groups

	Teacher support	N	ANOVA	pvalue
All	3.53 (3.51 - 3.55)	7 666		
Age				
11 years	4.17 (4.13 - 4.22)			
12 years	3.93 (3.88 - 3.99)			
13 years	3.54 (3.48 - 3.60)			
14 years	3.37 (3.31 - 3.43)	8 131	144.32	< .001
15 years	3.36 (3.30 - 3.41)			
16 years	3.26 (3.20 - 3.31)			
17 years	3.25 (3.19 - 3.31)			
18 years	3.25 (3.18 - 3.33)			
Age x Gender				
Girls 11	4.22 (4.15 - 4.28)			
Girls 12	3.88 (3.81 - 3.95)			
Girls 13	3.41 (3.33 - 3.49)			
Girls 14	3.25 (3.16 - 3.33)			
Girls 15	3.30 (3.22 - 3.37)			
Girls 16	3.20 (3.13 - 3.28)			
Girls 17	3.16 (3.08 - 3.24)			
Girls 18	3.11 (3.01 - 3.21)	8 076	73.87	< .001
Boys 11	4.14 (4.06 - 4.21)			
Boys 12	4.00 (3.92 - 4.07)			
Boys 13	3.69 (3.61 - 3.78)			
Boys 14	3.48 (3.40 - 3.57)			
Boys 15	3.43 (3.34 - 3.51)			
Boys 16	3.32 (3.23 - 3.40)			
Boys 17	3.33 (3.25 - 3.42)			
Boys 18	3.4 (3.29 - 3.51)			
Gender				
Girls	3.45 (3.42 - 3.48)	8 076	55.81	< .001
Boys	3.61 (3.58 - 3.64)			
Family affluence				
High	3.45 (3.40 - 3.5)			
Medium	3.55 (3.53 - 3.58)	7 910	7.44	< .001
Low	3.56 (3.51 - 3.61)			
Migration background				
First generation	3.55 (3.50 - 3.59)			
Second generation	3.47 (3.44 - 3.51)	7 867	14.16	< .001
No migration	3.61 (3.57 - 3.65)			
Family structure				
Others	3.42 (3.26 - 3.58)			
Stepfamily	3.55 (3.49 - 3.62)	7 706	15.26	< .001
Single parent	3.39 (3.34 - 3.44)			
Both parents	3.57 (3.55 - 3.60)			

Table 5: Means of teacher support according to sociodemographic groups (Cont.)

	Teacher support	N	ANOVA	pvalue
Type of school				
ESC – classes sup.	3.15 (3.10 - 3.21)			
ESG – classes sup	3.19 (3.13 - 3.25)			
Formation prof.	3.41 (3.32 - 3.49)			
ESC – classes inf.	3.38 (3.33 - 3.43)	8 131	187,56	< .001
ESG – classes inf. (VO)	3.41 (3.37 - 3.46)			
ESG – classes inf. (VP)	3.63 (3.55 - 3.72)			
EF	4.09 (4.05 - 4.13)			

Respondents were asked three items: "I feel my teachers accept me as I am"; "I feel that my teachers care about me as a person"; "I feel a lot of trust in my teachers". The response options ranged from "strongly disagree" (1) to "strongly agree" (5). The overall score is the mean of the three items, ranging from 1-to-5 (95% Confidence Interval).

Classmate support

Figure 30: Prevalence of classmate support according to sociodemographic groups

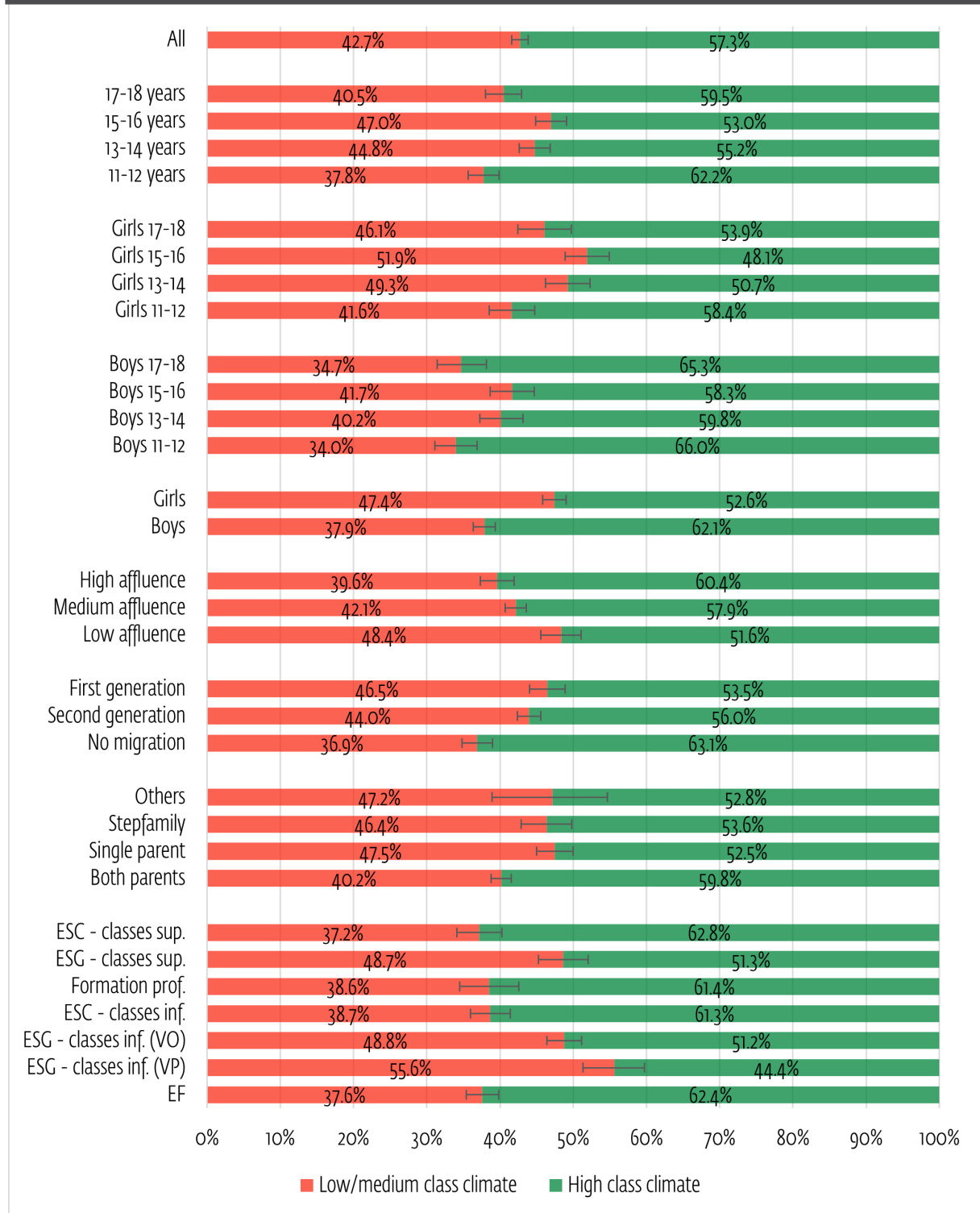


Table 6: Prevalence of classmate support according to sociodemographic groups

	Low/medium classmate support	High classmate support	Chi square test
All			N = 7 679
	42.7 (41.6 - 43.8)	57.3 (56.2 - 58.4)	
Age			N = 7 679
11-12 years	37.8 (35.7 - 39.9)	62.2 (60.1 - 64.3)	
13-14 years	44.8 (42.6 - 46.9)	55.2 (53.1 - 57.4)	p = .005
15-16 years	47.0 (44.9 - 49.1)	53.0 (50.9 - 55.1)	γ = -.049
17-18 years	40.5 (38.0 - 43.0)	59.5 (57.0 - 61.9)	
Age x Gender			N = 3 750
Girls 11-12	41.6 (38.5 - 44.7)	58.4 (55.3 - 61.5)	
Girls 13-14	49.3 (46.2 - 52.3)	50.7 (47.7 - 53.8)	p = .007
Girls 15-16	51.9 (48.9 - 55.0)	48.1 (45.1 - 51.2)	γ = -.066
Girls 17-18	46.1 (42.5 - 49.8)	53.9 (50.2 - 57.5)	
			N = 3 877
Boys 11-12	34.0 (31.1 - 36.9)	66.0 (63.0 - 68.8)	
Boys 13-14	40.2 (37.3 - 43.2)	59.8 (56.9 - 62.8)	p = .265
Boys 15-16	41.7 (38.7 - 44.7)	58.3 (55.3 - 61.3)	γ = -.027
Boys 17-18	34.7 (31.4 - 38.2)	65.3 (61.8 - 68.6)	
Gender			N = 7 627
Girls	47.4 (45.8 - 49.0)	52.6 (51.0 - 54.2)	p < .001
Boys	37.9 (36.3 - 39.4)	62.1 (60.6 - 63.7)	Cramér's V. = -.096
Family affluence			N = 7 466
High	39.6 (37.3 - 42.0)	60.4 (58 - 62.7)	
Medium	42.1 (40.7 - 43.6)	57.9 (56.4 - 59.3)	p < .001
Low	48.4 (45.6 - 51.1)	51.6 (48.9 - 54.3)	γ = .097
Migration background			N = 7 421
First generation	46.5 (44.1 - 48.9)	53.5 (51.1 - 55.9)	
Second generation	44.0 (42.4 - 45.6)	56.0 (54.4 - 57.6)	p < .001
No migration	36.9 (34.8 - 39.0)	63.1 (61.1 - 65.2)	Cramér's V. = .074
Family structure			N = 7 267
Others	47.2 (38.9 - 54.6)	52.8 (44.7 - 60.5)	
Stepfamily	46.4 (42.9 - 49.8)	53.6 (50.2 - 57.1)	p < .001
Single parent	47.5 (45.0 - 50.0)	52.5 (50.0 - 55)	Cramér's V. = .067
Both parents	40.2 (38.8 - 41.6)	59.8 (58.4 - 61.2)	
Type of school			N = 7 679
ESC – classes sup.	37.2 (34.1 - 40.2)	62.8 (59.8 - 65.9)	
ESG – classes sup	48.7 (45.3 - 52.1)	51.3 (47.9 - 54.7)	
Formation prof.	38.6 (34.5 - 42.6)	61.4 (57.4 - 65.5)	
ESC – classes inf.	38.7 (36.0 - 41.4)	61.3 (58.6 - 64.0)	p < .001
ESG – classes inf. (VO)	48.8 (46.4 - 51.1)	51.2 (48.9 - 53.7)	Cramér's V. = .124
ESG – classes inf. (VP)	55.6 (51.3 - 59.7)	44.4 (40.3 - 48.7)	
EF	37.6 (35.4 - 39.8)	62.4 (60.2 - 64.6)	

Respondents were asked three items: "the pupils in my class(es) enjoy being together"; "most of the pupils in my class(es) are they kind and helpful"; "other pupils accept me as I am". The response options ranged from "strongly disagree" (1) to "strongly agree" (5). The overall score is the mean of the three items. classmate support was categorised in: low/medium support (mean < 4) and high support (mean ≥ 4). The results are in mean (95% Confidence Interval).

Table 7: Means of classmate support according to sociodemographic groups

	Classmate support	N	ANOVA	pvalue
All	3.83 (3.81 - 3.84)	7 679		
Age				
11 years	3.97 (3.92 - 4.02)			
12 years	3.91 (3.87 - 3.96)			
13 years	3.81 (3.77 - 3.86)			
14 years	3.74 (3.69 - 3.79)	8 145	12.05	< .001
15 years	3.75 (3.70 - 3.80)			
16 years	3.76 (3.71 - 3.80)			
17 years	3.89 (3.84 - 3.94)			
18 years	3.76 (3.70 - 3.83)			
Age x Gender				
Girls 11	3.91 (3.83 - 3.98)			
Girls 12	3.86 (3.80 - 3.93)			
Girls 13	3.70 (3.63 - 3.77)			
Girls 14	3.63 (3.55 - 3.71)			
Girls 15	3.69 (3.62 - 3.76)			
Girls 16	3.69 (3.62 - 3.75)			
Girls 17	3.80 (3.73 - 3.88)			
Girls 18	3.65 (3.56 - 3.74)	8 090	12.38	< .001
Boys 11	4.03 (3.97 - 4.10)			
Boys 12	3.97 (3.91 - 4.03)			
Boys 13	3.93 (3.87 - 4.00)			
Boys 14	3.85 (3.78 - 3.92)			
Boys 15	3.82 (3.76 - 3.89)			
Boys 16	3.84 (3.77 - 3.90)			
Boys 17	3.98 (3.92 - 4.05)			
Boys 18	3.88 (3.79 - 3.97)			
Gender				
Girls	3.74 (3.72 - 3.77)	8 090	95.80	< .001
Boys	3.91 (3.89 - 3.94)			
Family affluence				
High	3.88 (3.84 - 3.91)			
Medium	3.83 (3.81 - 3.85)	7 922	9.36	< .001
Low	3.75 (3.71 - 3.80)			
Migration background				
First generation	3.78 (3.74 - 3.82)			
Second generation	3.81 (3.78 - 3.83)	7 876	15.82	< .001
No migration	3.91 (3.88 - 3.94)			
Family structure				
Others	3.66 (3.52 - 3.81)			
Stepfamily	3.78 (3.73 - 3.84)	7 715	13.33	< .001
Single parent	3.75 (3.71 - 3.79)			
Both parents	3.87 (3.85 - 3.89)			

Table 7: Means of classmate support according to sociodemographic groups (Cont.)

	Classmate support	N	ANOVA	pvalue
Type of school				
ESC – classes sup.	3.91 (3.87 - 3.96)			
ESG – classes sup	3.70 (3.64 - 3.75)			
Formation prof.	3.86 (3.79 - 3.92)			
ESC – classes inf.	3.88 (3.83 - 3.92)	8 145	24.81	< .001
ESG – classes inf. (VO)	3.71 (3.68 - 3.75)			
ESG – classes inf. (VP)	3.66 (3.58 - 3.73)			
EF	3.95 (3.92 - 3.99)			

Respondents were asked three items: "the pupils in my class(es) enjoy being together"; "most of the pupils in my class(es) are they kind and helpful"; "other pupils accept me as I am". The response options ranged from "strongly disagree" (1) to "strongly agree" (5). The overall score is the mean of the three items, ranging from 1-to-5 (95% Confidence Interval).

Family support

Figure 31: Prevalence of family support according to sociodemographic groups

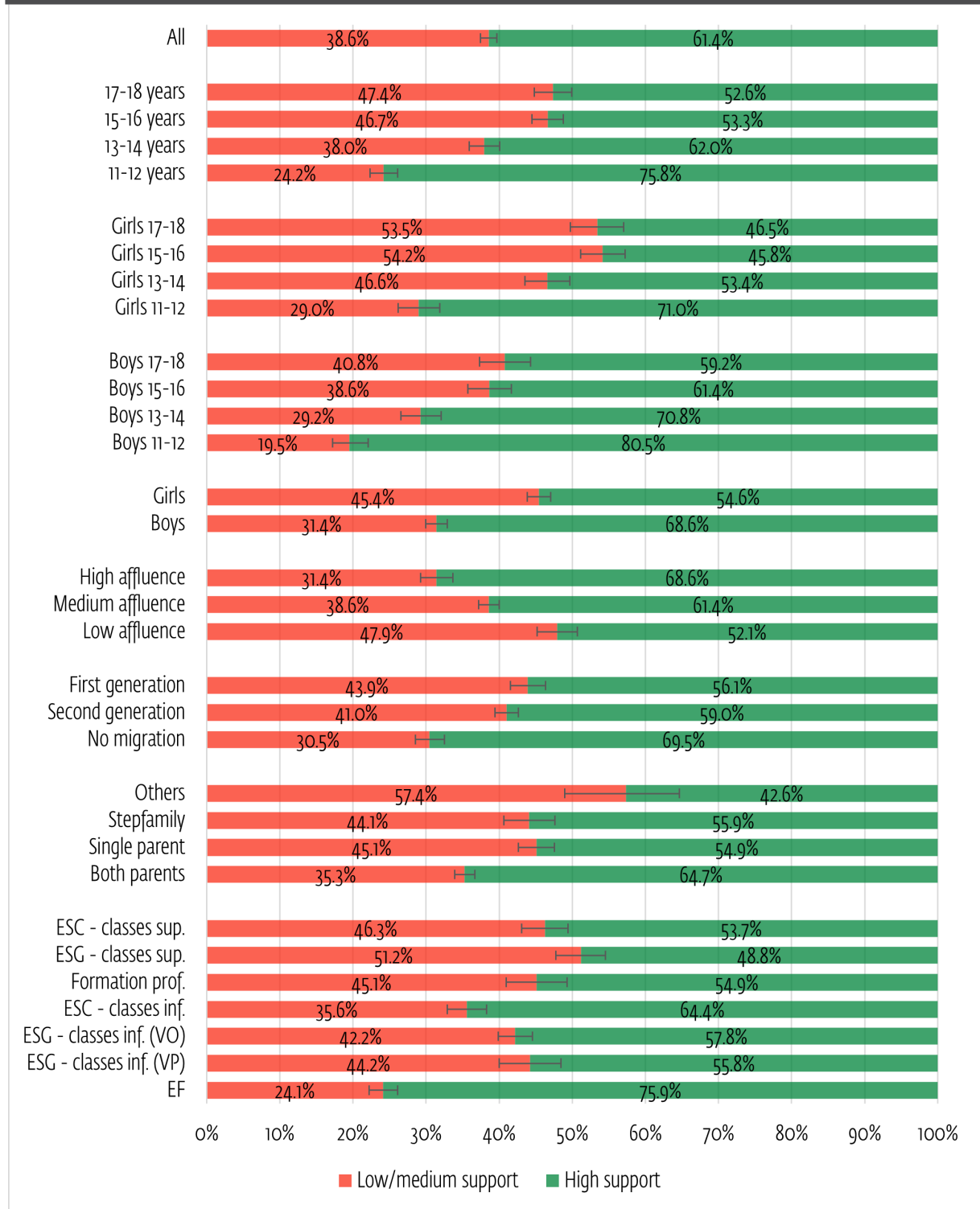


Table 8: Prevalence of family support according to sociodemographic groups

	Low/medium support	High support	Chi square test
All			N = 7 604
	38.6 (37.5 - 39.7)	61.4 (60.3 - 62.5)	
Age			N = 7 604
11-12 years	24.2 (22.4 - 26.1)	75.8 (73.9 - 77.6)	
13-14 years	38.0 (35.9 - 40.1)	62.0 (59.9 - 64.1)	$p < .001$
15-16 years	46.7 (44.5 - 48.8)	53.3 (51.2 - 55.5)	$\gamma = -.275$
17-18 years	47.4 (44.8 - 49.9)	52.6 (50.1 - 55.2)	
Age x Gender			N = 3 712
Girls 11-12	29.0 (26.2 - 31.9)	71.0 (68.1 - 73.8)	
Girls 13-14	46.6 (43.5 - 49.7)	53.4 (50.3 - 56.5)	$p < .001$
Girls 15-16	54.2 (51.1 - 57.2)	45.8 (42.8 - 48.9)	$\gamma = .275$
Girls 17-18	53.5 (49.8 - 57.1)	46.5 (42.9 - 50.2)	
			N = 3 839
Boys 11-12	19.5 (17.2 - 22.1)	80.5 (77.9 - 82.8)	
Boys 13-14	29.2 (26.6 - 32.1)	70.8 (68.0 - 73.5)	$p < .001$
Boys 15-16	38.6 (35.7 - 41.7)	61.4 (58.3 - 64.3)	$\gamma = -.280$
Boys 17-18	40.8 (37.3 - 44.3)	59.2 (55.7 - 62.7)	
Gender			N = 7 551
Girls	45.4 (43.8 - 47.1)	54.6 (52.9 - 56.2)	$p < .001$
Boys	31.4 (30.0 - 32.9)	68.6 (67.1 - 70.0)	Cramér's V. = -.144
Family affluence			N = 7 392
High	31.4 (29.3 - 33.7)	68.6 (66.3 - 70.7)	
Medium	38.6 (37.2 - 40.0)	61.4 (60.0 - 62.8)	$p < .001$
Low	47.9 (45.2 - 50.7)	52.1 (49.3 - 54.8)	$\gamma = .194$
Migration background			N = 7 387
First generation	43.9 (41.5 - 46.3)	56.1 (53.7 - 58.5)	
Second generation	41.0 (39.5 - 42.6)	59 (57.3 - 60.5)	$p < .001$
No migration	30.5 (28.5 - 32.5)	69.5 (67.5 - 71.5)	Cramér's V. = .108
Family structure			N = 7 241
Others	57.4 (49.0 - 64.7)	42.6 (34.7 - 50.3)	
Stepfamily	44.1 (40.7 - 47.6)	55.9 (52.4 - 59.3)	$p < .001$
Single parent	45.1 (42.7 - 47.6)	54.9 (52.4 - 57.3)	Cramér's V. = .106
Both parents	35.3 (33.9 - 36.7)	64.7 (63.3 - 66.1)	
Type of school			N = 7 604
ESC – classes sup.	46.3 (43.1 - 49.4)	53.7 (50.6 - 56.9)	
ESG – classes sup	51.2 (47.7 - 54.6)	48.8 (45.3 - 52.1)	
Formation prof.	45.1 (41.0 - 49.3)	54.9 (50.7 - 59)	
ESC – classes inf.	35.6 (32.9 - 38.3)	64.4 (61.7 - 67.1)	$p < .001$
ESG – classes inf. (VO)	42.2 (39.9 - 44.6)	57.8 (55.4 - 60.1)	Cramér's V. = .189
ESG – classes inf. (VP)	44.2 (40.0 - 48.5)	55.8 (51.5 - 60.0)	
EF	24.1 (22.2 - 26.1)	75.9 (73.9 - 77.8)	

Respondents were asked four items: "my family really try to help me"; "I get the emotional support I need from my family"; "I can talk about my problems with my family"; "my family is willing to help me make decisions". The response options ranged from "very strongly disagree" (1) to "very strongly agree" (7). The overall score is the mean of the four items. Family support was categorised in: low/medium support (mean < 5.5) and high support (mean ≥ 5.5). The results are in mean (95% Confidence Interval).

Table 9: Means of family support according to sociodemographic groups

	Family support	N	ANOVA	pvalue
All	5.44 (5.40 - 5.48)	7 604		
Age				
11 years	6.06 (5.97 - 6.14)			
12 years	5.87 (5.79 - 5.96)			
13 years	5.52 (5.42 - 5.62)			
14 years	5.35 (5.25 - 5.46)	8 068	49.52	< .001
15 years	5.26 (5.15 - 5.37)			
16 years	5.06 (4.96 - 5.17)			
17 years	5.19 (5.08 - 5.30)			
18 years	5.01 (4.86 - 5.16)			
Age x Gender				
Girls 11	6.02 (5.90 - 6.15)			
Girls 12	5.64 (5.51 - 5.78)			
Girls 13	5.16 (5.00 - 5.31)			
Girls 14	4.97 (4.81 - 5.14)			
Girls 15	4.93 (4.77 - 5.09)			
Girls 16	4.77 (4.61 - 4.93)			
Girls 17	4.9 (4.73 - 5.07)			
Girls 18	4.73 (4.51 - 4.94)	8 011	42.20	< .001
Boys 11	6.09 (5.97 - 6.20)			
Boys 12	6.12 (6.01 - 6.22)			
Boys 13	5.92 (5.80 - 6.04)			
Boys 14	5.72 (5.59 - 5.85)			
Boys 15	5.61 (5.48 - 5.74)			
Boys 16	5.36 (5.22 - 5.51)			
Boys 17	5.48 (5.34 - 5.63)			
Boys 18	5.32 (5.12 - 5.52)			
Gender				
Girls	5.16 (5.10 - 5.21)	8 011	238.92	< .001
Boys	5.73 (5.68 - 5.78)			
Family affluence				
High	5.73 (5.66 - 5.80)			
Medium	5.46 (5.41 - 5.51)	7 846	77.72	< .001
Low	4.99 (4.89 - 5.10)			
Migration background				
First generation	5.19 (5.10 - 5.28)			
Second generation	5.35 (5.30 - 5.41)	7 840	65.06	< .001
No migration	5.76 (5.70 - 5.83)			
Family structure				
Others	4.62 (4.29 - 4.95)			
Stepfamily	5.22 (5.10 - 5.34)	7 688	44.80	< .001
Single parent	5.17 (5.08 - 5.25)			
Both parents	5.58 (5.53 - 5.63)			

Table 9: Means of family support according to sociodemographic groups (Cont.)

	Family support	N	ANOVA	pvalue
Type of school				
ESC – classes sup.	5.20 (5.10 - 5.31)			
ESG – classes sup	4.97 (4.85 - 5.10)			
Formation prof.	5.24 (5.09 - 5.38)			
ESC – classes inf.	5.58 (5.49 - 5.66)	8 068	54.46	< .001
ESG – classes inf. (VO)	5.27 (5.19 - 5.36)			
ESG – classes inf. (VP)	5.17 (5.01 - 5.33)			
EF	5.96 (5.90 - 6.02)			

Respondents were asked four items: "my family really try to help me"; "I get the emotional support I need from my family"; "I can talk about my problems with my family"; "my family is willing to help me make decisions". The response options ranged from "very strongly disagree" (1) to "very strongly agree" (7). The overall score is the mean of the four items, ranging from 1-to-7 (95% Confidence Interval).

Communication with mother

Figure 32: Prevalence of communication with mother according to sociodemographic groups

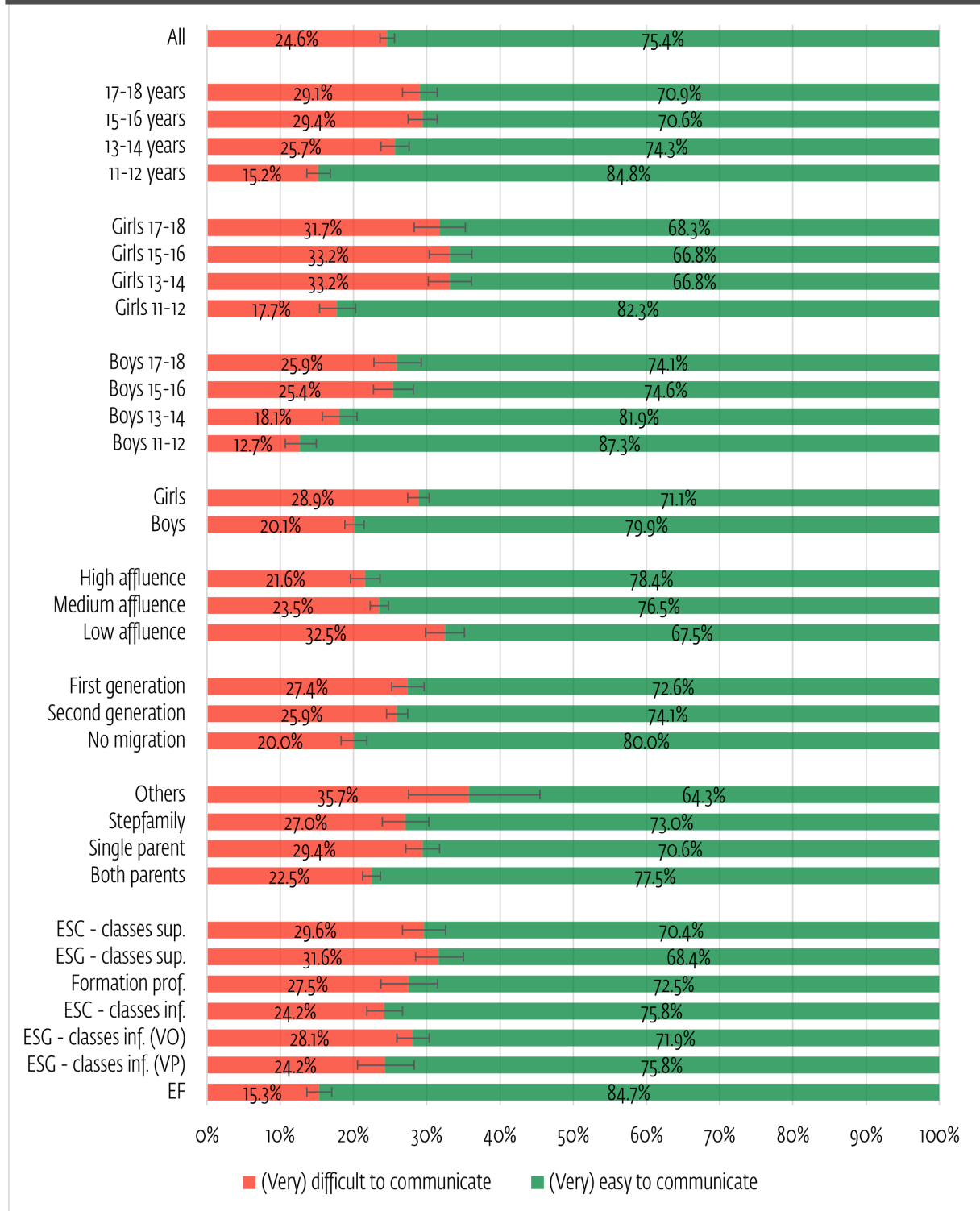


Table 10: Prevalence of communication with mother according to sociodemographic groups

	(Very) difficult to communicate (3-4)	(Very) easy to communicate (1-2)	Chi square test
All			N = 7 260
	24.6 (23.6 - 25.6)	75.4 (74.4 - 76.4)	
Age			N = 7 260
11-12 years	15.2 (13.6 - 16.9)	84.8 (83.1 - 86.4)	
13-14 years	25.7 (23.8 - 27.6)	74.3 (72.3 - 76.2)	$p < .001$
15-16 years	29.4 (27.4 - 31.5)	70.6 (68.5 - 72.6)	$\gamma = -.208$
17-18 years	29.1 (26.7 - 31.5)	70.9 (68.5 - 73.3)	
Age x Gender			N = 3 570
Girls 11-12	17.7 (15.4 - 20.3)	82.3 (79.7 - 84.6)	
Girls 13-14	33.2 (30.2 - 36.1)	66.8 (63.9 - 69.8)	$p < .001$
Girls 15-16	33.2 (30.3 - 36.2)	66.8 (63.9 - 69.8)	$\gamma = -.179$
Girls 17-18	31.7 (28.3 - 35.3)	68.3 (64.7 - 71.7)	
			N = 3 642
Boys 11-12	12.7 (10.7 - 14.9)	87.3 (85.1 - 89.3)	
Boys 13-14	18.1 (15.7 - 20.5)	81.9 (79.5 - 84.3)	$p < .001$
Boys 15-16	25.4 (22.7 - 28.2)	74.6 (71.8 - 77.3)	$\gamma = -.244$
Boys 17-18	25.9 (22.8 - 29.2)	74.1 (70.8 - 77.2)	
Gender			N = 7 213
Girls	28.9 (27.4 - 30.4)	71.1 (69.6 - 72.6)	$p < .001$
Boys	20.1 (18.8 - 21.4)	79.9 (78.6 - 81.2)	Cramér's V. = -.102
Family affluence			N = 7 078
High	21.6 (19.6 - 23.6)	78.4 (76.4 - 80.4)	
Medium	23.5 (22.3 - 24.8)	76.5 (75.2 - 77.7)	$p < .001$
Low	32.5 (29.8 - 35.2)	67.5 (64.8 - 70.2)	$\gamma = .152$
Migration background			N = 7 076
First generation	27.4 (25.2 - 29.7)	72.6 (70.3 - 74.8)	
Second generation	25.9 (24.5 - 27.4)	74.1 (72.6 - 75.5)	$p < .001$
No migration	20.0 (18.3 - 21.8)	80.0 (78.2 - 81.7)	Cramér's V. = .068
Family structure			N = 6 946
Others	35.7 (27.5 - 45.4)	64.3 (55.5 - 73.3)	
Stepfamily	27.0 (23.9 - 30.3)	73.0 (69.7 - 76.1)	$p < .001$
Single parent	29.4 (27.1 - 31.8)	70.6 (68.2 - 72.9)	Cramér's V. = .075
Both parents	22.5 (21.3 - 23.7)	77.5 (76.3 - 78.7)	
Type of school			N = 7 260
ESC – classes sup.	29.6 (26.7 - 32.6)	70.4 (67.4 - 73.3)	
ESG – classes sup	31.6 (28.5 - 35.0)	68.4 (65.1 - 71.6)	
Formation prof.	27.5 (23.8 - 31.5)	72.5 (68.5 - 76.2)	
ESC – classes inf.	24.2 (21.8 - 26.7)	75.8 (73.3 - 78.2)	$p < .001$
ESG – classes inf. (VO)	28.1 (25.9 - 30.3)	71.9 (69.7 - 74.1)	Cramér's V. = .134
ESG – classes inf. (VP)	24.2 (20.5 - 28.3)	75.8 (71.7 - 79.5)	
EF	15.3 (13.7 - 17.0)	84.7 (83.0 - 86.4)	

Respondents were asked how it is for you to talk to their mother. The answer options ranged from "very easy" (1) to "don't have or see this person" (5). The response option "don't have or see this person" (category 5) was excluded. Communication with mother was categorised in: (very) difficult (categories 3 and 4) and (very) easy (categories 1 and 2). The results are in % (95% Confidence Interval).

Communication with father

Figure 33: Prevalence of communication with father according to sociodemographic groups

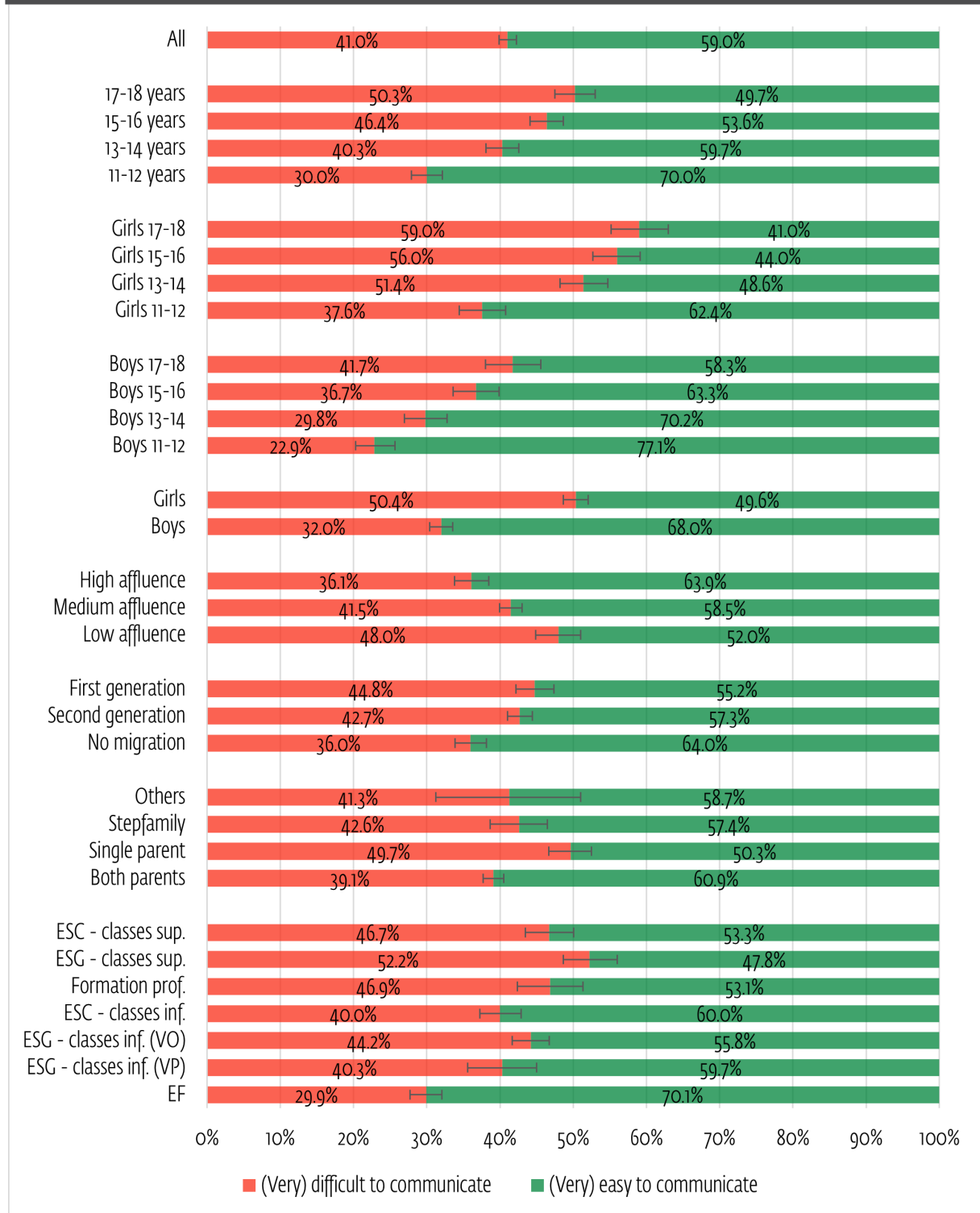


Table 11: Prevalence of communication with father according to sociodemographic groups

	(Very) difficult to communicate (3-4)	(Very) easy to communicate (1-2)	Chi square test
All			N = 6 803
	41.0 (39.9 - 42.2)	59.0 (57.8 - 60.1)	
Age			N = 6 803
11-12 years	30.0 (27.9 - 32.1)	70.0 (67.8 - 72.0)	
13-14 years	40.3 (38.1 - 42.6)	59.7 (57.4 - 61.9)	$p < .001$
15-16 years	46.4 (44.1 - 48.6)	53.6 (51.4 - 55.9)	$\gamma = -.227$
17-18 years	50.3 (47.5 - 53.0)	49.7 (47.0 - 52.5)	
Age x Gender			N = 3 285
Girls 11-12	37.6 (34.4 - 40.8)	62.4 (59.2 - 65.6)	
Girls 13-14	51.4 (48.2 - 54.7)	48.6 (45.4 - 51.9)	$p < .001$
Girls 15-16	56.0 (52.7 - 59.2)	44.0 (40.8 - 47.3)	$\gamma = -.230$
Girls 17-18	59.0 (55.2 - 63.0)	41.0 (37.2 - 45.0)	
			N = 3 475
Boys 11-12	22.9 (20.3 - 25.6)	77.1 (74.4 - 79.7)	
Boys 13-14	29.8 (27.0 - 32.8)	70.2 (67.2 - 73)	$p < .001$
Boys 15-16	36.7 (33.6 - 39.9)	63.3 (60.1 - 66.4)	$\gamma = -.235$
Boys 17-18	41.7 (38.0 - 45.6)	58.3 (54.6 - 62.1)	
Gender			N = 6 760
Girls	50.4 (48.6 - 52.1)	49.6 (47.9 - 51.4)	$p < .001$
Boys	32.0 (30.4 - 33.5)	68.0 (66.5 - 69.6)	Cramér's V. = $-.187$
Family affluence			N = 6 627
High	36.1 (33.8 - 38.5)	63.9 (61.5 - 66.2)	
Medium	41.5 (40.0 - 43.0)	58.5 (57.0 - 60.0)	$p < .001$
Low	48.0 (44.9 - 51.1)	52.0 (48.9 - 55.1)	$\gamma = .137$
Migration background			N = 6 624
First generation	44.8 (42.2 - 47.4)	55.2 (52.6 - 57.8)	
Second generation	42.7 (41.1 - 44.4)	57.3 (55.6 - 58.9)	$p < .001$
No migration	36.0 (33.8 - 38.1)	64.0 (61.9 - 66.2)	Cramér's V. = $.069$
Family structure			N = 6 495
Others	41.3 (31.3 - 51.0)	58.7 (47.9 - 67.7)	
Stepfamily	42.6 (38.7 - 46.5)	57.4 (53.5 - 61.3)	$p < .001$
Single parent	49.7 (46.7 - 52.5)	50.3 (47.4 - 53.2)	Cramér's V. = $.081$
Both parents	39.1 (37.7 - 40.5)	60.9 (59.5 - 62.3)	
Type of school			N = 6 803
ESC – classes sup.	46.7 (43.5 - 50.1)	53.3 (49.9 - 56.5)	
ESG – classes sup.	52.2 (48.6 - 56.0)	47.8 (44.2 - 51.5)	
Formation prof.	46.9 (42.4 - 51.3)	53.1 (48.7 - 57.6)	
ESC – classes inf.	40.0 (37.2 - 42.9)	60.0 (57.1 - 62.8)	$p < .001$
ESG – classes inf. (VO)	44.2 (41.7 - 46.7)	55.8 (53.3 - 58.3)	Cramér's V. = $.148$
ESG – classes inf. (VP)	40.3 (35.6 - 45.0)	59.7 (55.0 - 64.4)	
EF	29.9 (27.8 - 32.1)	70.1 (67.8 - 72.2)	

Respondents were asked how it is for you to talk to their father. The answer options ranged from "very easy" (1) to "don't have or see this person" (5). The response option "don't have or see this person" (category 5) was excluded. Communication with father was categorised in: (very) difficult (categories 3 and 4) and (very) easy (categories 1 and 2). The results are in % (95% Confidence Interval).

Friends Support

Figure 34: Prevalence of friends support according to sociodemographic groups

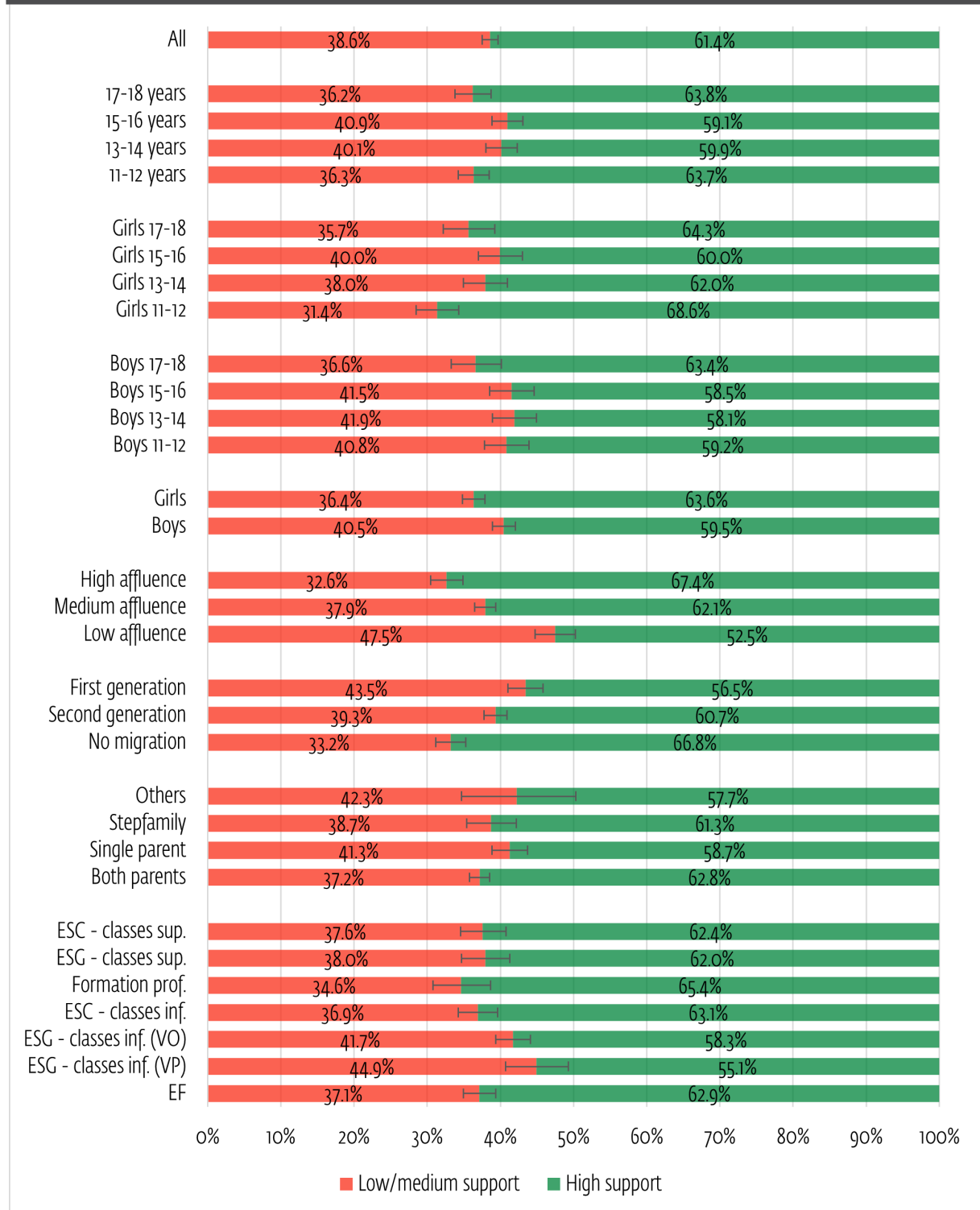


Table 12: Prevalence of friends support according to sociodemographic groups

	Low/medium support	High support	Chi square test
All			N = 7 572
	38.6 (37.5 - 39.7)	61.4 (60.3 - 62.5)	
Age			N = 7 572
11-12 years	36.3 (34.2 - 38.5)	63.7 (61.5 - 65.8)	
13-14 years	40.1 (38.1 - 42.3)	59.9 (57.7 - 61.9)	p = .547
15-16 years	40.9 (38.9 - 43.1)	59.1 (56.9 - 61.1)	γ = -.011
17-18 years	36.2 (33.8 - 38.7)	63.8 (61.4 - 66.2)	
Age x Gender			N = 3 707
Girls 11-12	31.4 (28.5 - 34.3)	68.6 (65.7 - 71.5)	
Girls 13-14	38.0 (35.0 - 41.0)	62.0 (59.0 - 65.0)	p = .012
Girls 15-16	40.0 (37.0 - 43.0)	60.0 (57.0 - 63.0)	γ = -.063
Girls 17-18	35.7 (32.2 - 39.2)	64.3 (60.8 - 67.8)	
			N = 3 813
Boys 11-12	40.8 (37.8 - 43.9)	59.2 (56.1 - 62.2)	
Boys 13-14	41.9 (38.9 - 44.9)	58.1 (55.1 - 61.1)	p = .129
Boys 15-16	41.5 (38.6 - 44.6)	58.5 (55.5 - 61.5)	γ = .037
Boys 17-18	36.6 (33.3 - 40.1)	63.4 (60.0 - 66.9)	
Gender			N = 7 520
Girls	36.4 (34.8 - 37.9)	63.6 (62.1 - 65.2)	p < .001
Boys	40.5 (38.9 - 42.0)	59.5 (58.0 - 61.1)	Cramér's V. = .042
Family affluence			N = 7 359
High	32.6 (30.5 - 34.9)	67.4 (65.1 - 69.5)	
Medium	37.9 (36.5 - 39.4)	62.1 (60.6 - 63.5)	p < .001
Low	47.5 (44.7 - 50.3)	52.5 (49.7 - 55.3)	γ = .172
Migration background			N = 7 372
First generation	43.5 (41.0 - 45.9)	56.5 (54.1 - 59.0)	
Second generation	39.3 (37.8 - 40.9)	60.7 (59.1 - 62.2)	p < .001
No migration	33.2 (31.2 - 35.3)	66.8 (64.7 - 68.8)	Cramér's V. = .076
Family structure			N = 7 227
Others	42.3 (34.7 - 50.3)	57.7 (49.7 - 65.3)	
Stepfamily	38.7 (35.4 - 42.2)	61.3 (57.8 - 64.6)	p = .023
Single parent	41.3 (38.9 - 43.7)	58.7 (56.3 - 61.1)	Cramér's V. = .036
Both parents	37.2 (35.8 - 38.6)	62.8 (61.4 - 64.2)	
Type of school			N = 7 572
ESC – classes sup.	37.6 (34.6 - 40.8)	62.4 (59.2 - 65.4)	
ESG – classes sup	38.0 (34.7 - 41.3)	62.0 (58.7 - 65.3)	
Formation prof.	34.6 (30.8 - 38.7)	65.4 (61.3 - 69.2)	
ESC – classes inf.	36.9 (34.2 - 39.6)	63.1 (60.4 - 65.8)	p < .001
ESG – classes inf. (VO)	41.7 (39.4 - 44.1)	58.3 (55.9 - 60.6)	Cramér's V. = .055
ESG – classes inf. (VP)	44.9 (40.7 - 49.3)	55.1 (50.7 - 59.3)	
EF	37.1 (34.9 - 39.4)	62.9 (60.6 - 65.1)	

Respondents were asked four items: "my friends really try to help me"; "I can count on my friends when things go wrong"; "I have friends with whom I can share my joys and sorrows"; "I can talk about my problems with my friends". The response options ranged from "very strongly disagree" (1) to "very strongly agree" (7). The overall score is the mean of the four items. Friends support was categorised in: low/medium support (mean < 5.5) and high support (mean ≥ 5.5). The results are in mean (95% Confidence Interval).

Table 13: Means of friends support according to sociodemographic groups

	Friends support	N	ANOVA	pvalue
All	5.45 (5.42 - 5.48)	7 572		
Age				
11 years	5.51 (5.40 - 5.61)			
12 years	5.57 (5.48 - 5.66)			
13 years	5.35 (5.26 - 5.45)			
14 years	5.42 (5.32 - 5.51)	8 035	3.21	.002
15 years	5.34 (5.25 - 5.44)			
16 years	5.43 (5.34 - 5.52)			
17 years	5.55 (5.46 - 5.65)			
18 years	5.44 (5.31 - 5.56)			
Age x Gender				
Girls 11	5.68 (5.54 - 5.82)			
Girls 12	5.68 (5.55 - 5.81)			
Girls 13	5.39 (5.26 - 5.53)			
Girls 14	5.45 (5.31 - 5.60)			
Girls 15	5.36 (5.22 - 5.50)			
Girls 16	5.43 (5.30 - 5.56)			
Girls 17	5.57 (5.43 - 5.71)			
Girls 18	5.40 (5.22 - 5.58)			
		7 979	2.62	< .001
Boys 11	5.35 (5.21 - 5.49)			
Boys 12	5.47 (5.35 - 5.60)			
Boys 13	5.33 (5.19 - 5.46)			
Boys 14	5.39 (5.27 - 5.52)			
Boys 15	5.34 (5.21 - 5.47)			
Boys 16	5.44 (5.31 - 5.57)			
Boys 17	5.54 (5.41 - 5.67)			
Boys 18	5.48 (5.31 - 5.65)			
Gender				
Girls	5.49 (5.44 - 5.54)			
Boys	5.41 (5.37 - 5.46)	7 979	4.62	.032
Family affluence				
High	5.65 (5.59 - 5.72)			
Medium	5.48 (5.44 - 5.53)	7 812	48.04	< .001
Low	5.13 (5.04 - 5.22)			
Migration background				
First generation	5.23 (5.15 - 5.31)			
Second generation	5.42 (5.37 - 5.47)	7 824	44.10	< .001
No migration	5.68 (5.62 - 5.74)			
Family structure				
Others	5.13 (4.83 - 5.44)			
Stepfamily	5.47 (5.37 - 5.58)			
Single parent	5.34 (5.27 - 5.42)	7 673	7.28	< .001
Both parents	5.51 (5.46 - 5.55)			

Table 13: Means of friends support according to sociodemographic groups (Cont.)

	Friends support	N	ANOVA	pvalue
Type of school				
ESC – classes sup.	5.55 (5.46 - 5.63)	8 035	5.36	< .001
ESG – classes sup	5.45 (5.35 - 5.56)			
Formation prof.	5.52 (5.39 - 5.65)			
ESC – classes inf.	5.50 (5.42 - 5.58)			
ESG – classes inf. (VO)	5.34 (5.26 - 5.42)			
ESG – classes inf. (VP)	5.21 (5.06 - 5.36)			
EF	5.51 (5.44 - 5.58)			

Respondents were asked four items: "My friends really try to help me"; "I can count on my friends when things go wrong"; "I have friends with whom I can share my joys and sorrows"; "I can talk about my problems with my friends". The response options ranged from "very strongly disagree" (1) to "very strongly agree" (7). The overall score is the mean of the four items, ranging from 1-to-7 (95% Confidence Interval).

Gender identities, social support and mental health

Table 14: Family, friend, teacher, and classmate support mean score according to gender-conformity

	Cisgender Boy	Cisgender Girl	Non-cisgender	F test	p-value
<i>Social Support</i>					
Family Support (1-7)	5.64 (5.58-5.70)	5.00 (4.94-5.07)	3.73 (3.45-4.01)	178.658	< .001
Friends Support (1-7)	5.44 (5.38-5.49)	5.47 (5.42-5.53)	5.05 (4.78 - 5.32)	6.743	< .001
<i>School Context</i>					
Teacher Support (1-5)	3.44 (3.41-3.48)	3.28 (3.24 - 3.31)	3.03 (2.89 - 3.18)	32.676	< .001
Classmate support (1-5)	3.88 (3.86-3.91)	3.71 (3.68-3.74)	3.47 (3.34-3.60)	48.953	< .001

Table 15: Mental health mean score according to gender-conformity

	Cisgender Boy	Cisgender Girl	Non-cisgender	F test	p-value
<i>Mental Health</i>					
Life Satisfaction (0-10)	7.50 (7.44 - 7.57)	6.90 (6.83 - 6.97)	5.66 (5.33 - 5.98)	139.53	< .001
Who-5 index Well-being (0-25)	15.0 (14.82 - 15.19)	12.13 (11.94 - 12.32)	9.92 (9.11 - 10.73)	266.74	< .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>
UNESCO	United Nations Educational, Scientific and Cultural Organization
VO	<i>Voie d'orientation</i>
VP	<i>Voie de préparation</i>
WHO	World Health Organization

Report on the Luxembourg HBSC Survey 2022

HEALTH BEHAVIOUR IN SCHOOL-AGED CHILDREN (HBSC)

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

In general, age, gender, family affluence, migration background and type of school were associated with the social context indicators in HBSC 2022 Luxembourg Survey. Boys, younger adolescents, those from families with low affluence, first-generation migrants and pupils attending *Enseignement Fondamental* were more likely to like school a lot and to feel a little or no pressure. Pupils who thought that their teacher(s) considered their school performance below average were more likely to not like school and feel schoolwork pressure.

Regarding family and friends, boys more frequently reported to have an (very) easy communication with both their father and their mother and a high family support, while girls perceived higher support from friends. Additionally, adolescents from high affluence families, living with both parents and with no migration background perceived higher support from their family and friends.

Furthermore, this report explored non-binary gender identities and compared the perceived social support and mental health of cisgender boys, cisgender girls and non-cisgender individuals in secondary schools. In sum, non-cisgender adolescents reported worse levels of family, friends, teacher and classmate support and lower levels of life satisfaction and well-being compared to their cisgender peers.

University of Luxembourg

Campus Belval

Maison de Sciences Humaines

11, Porte des Sciences

L-4366 Esch-sur-Alzette

www.hbsc.lu