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HEALTH BEHAVIOUR IN SCHOOL-AGED CHILDREN
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COVID-19 impact and trends in health of school-aged children from 2006-2022 in Luxembourg

Report on the Luxembourg HBSC Survey 2022

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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
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Content

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Acknowledgement

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

The present report explores the impact of the COVID-19 pandemic on 11- to 18-year-olds in Luxembourg by documenting the perceived impact of the COVID-19 pandemic and the 2006-2022 trends in health outcomes, health behaviours and contexts as observed in the HBSC (Health Behaviour in School-aged Children) Luxembourg 2022 survey. This report provides information about these two aspects for the overall impact of the COVID-19 pandemic and the areas of life "Health", "Relationships with family", "Relationships with friends", "Mental health", "School performance", "Physical activity" and "Dietary intake".

General impact of the COVID-19 pandemic

Mental health and school performance were the two areas of life most negatively impacted by the pandemic, while relationships with the family and with friends were the most positively impacted ones according to the adolescents' perception. Around 10 % of the adolescents reported a negative impact of the pandemic in at least 6 out of 10 areas of life, while 40.6% of the adolescents reported positive impacts in at least 6 out of 10 areas of life. Girls, older adolescents, adolescents with lower family affluence and pupils in *voie préparatoire* are more likely to report negative impact in at least 6 out of 10 areas of life.

For the overarching areas "life as a whole" and "future expectations" results were quite similar. Respectively, 21.8% and 19.9% of adolescents report a negative or very negative impact of the pandemic, while 37% and 39 % respectively report a positive or very positive impact. Higher proportions of (very) positive impact and lower proportions of (very) negative impacts were reported by boys, younger adolescents, adolescents from families with low family affluence and adolescents not living with both parents.

The perceived impact of the pandemic on the financial situation of the adolescents' families was either negative or very negative for 11.6 % of adolescents and positive or very positive for 43.2%. Significant differences between adolescents from low and high family affluence as well as with and without migration background were observed for the perceived impact on families' financial situation. These perceptions indicate that the COVID-19 pandemic might have further increased the gap between poor and rich.

Health

Almost half of the adolescents reported a positive or very positive impact of the pandemic on their health, while 14.5% reported either a negative or very negative impact. Boys, younger adolescents and adolescents with migration background reported (very) positive impacts in larger proportions than girls, older respondents and adolescents without migration background.

The trends in adolescents' self-rated health were stable since 2006 and no clear impact of the COVID-19 pandemic was identified based on these observations.

Relationships with family

With 55.1% of adolescents reporting a positive or very positive impact of the pandemic on their relationship with their family and 13.9% reporting a negative or very negative impact, the relationships with family was the most positively

impacted area of adolescents' life and the second least negatively impacted by the pandemic. Adolescents from low family affluence and those not living with both parents were more likely to report a (very) negative impact on family relationships. Boys and younger respondents reported more (very) positive impacts than their counterparts.

The trends from 2006 to 2022 showed consistently higher proportions of adolescents reporting an (very) easier communication with their mother than with their father. Boys consistently reported higher levels of (very) easy communication with both parents than girls. Ease of communication with their mother has remained quite stable over time. No clear impact of the COVID-19 pandemic on the ease of communication with either parent was identified.

Relationships with friends

The relations with friends was the area of life with the second highest proportion of adolescents reporting a positive or very positive impact from the COVID-19 pandemic with 54.1%. On the other side of the scale, 14.8% of adolescents reported a negative or very negative impact. Boys and those from high family affluence reported a (very) positive impact of the pandemic on their relationships with friends more frequently than their counterparts.

For the relation with classmates, a substantial decrease in trends in good classmate support between 2018 and 2022 was found, after previously observed small decreases and stability. This decrease points towards a change in the perception of the classroom environment during the COVID-19 pandemic. The decrease is particularly strong in girls and the gap between the genders has thus further increased between 2018 and 2022.

Mental health

Every third adolescent (32.5%) reported a negative or very negative impact of the COVID-19 pandemic on their mental health, making mental health the domain involving the highest prevalence of reported (very) negative impact of all 10 areas of life. Two thirds of adolescents reported a neutral (32.7%) or a (very) positive (34.8%) perceived impact. A large gender gap disfavouring girls was observed and adolescents from low family affluence or not living with both parents perceived a negative impact on mental health in higher proportions than their respective counterparts.

The trends in life satisfaction and in multiple health complaints are in line with the adolescent girl's perception that their mental health was particularly impacted by the COVID-19 pandemic. Between 2006 and 2022, girls have consistently reported multiple health complaints in higher proportions than boys and high life satisfaction in lower proportions. This gender gap has been aggravated by a much steeper increase in multiple health complaints for girls than for boys between 2018 and 2022. There are also indications that the proportion of girls reporting high levels of life satisfaction have decreased between 2018 and 2022, while the boys stayed rather stable.

School performance

Every fourth adolescents (25.2%) reported a negative or very negative impact on their school performance. School performance is the area with the second highest prevalence of a (very) negative perceived impact of the pandemic. 39.4% of respondents reported positive or very positive impacts. School performance was the only examined area of life without gender differences in perceived impact. Younger adolescents and adolescents living with both parents reported (very) positive impacts of the pandemic on school performance in higher proportions then their counterparts.

Since 2010, trends show that boys consistently report high teacher support in higher proportions and schoolwork pressure in lower proportions than girls. The prevalence of high teacher support fluctuates considerably between years while trends in schoolwork pressure show a linear increase since 2010. None of these changes are unique for the time period between 2018 to 2022 period or the COVID-19 pandemic.

Physical activity

Physical activity is the area with the least respondents reporting a neutral impact of the pandemic as 48.6% reported a positive or very positive impact and 24.5% reported a negative or very negative impact. Boys, younger adolescents, adolescents from high family affluence, adolescents living with both parents and adolescents without migration background were less likely to report a (very) negative perceived impact of the pandemic on their physical activity.

Both trends in vigorous physical activity (VPA) and moderate-to-vigorous physical activity (MVPA) fluctuated between 2006 and 2022 and the increase of levels of VPA and MVPA between 2018 and 2022 is similar to previous fluctuations and does not seem to be linked to the pandemic. Levels of VPA and MVPA have consistently been higher in boys than in girls since 2006.

Dietary intake and eating habits

Dietary intake was operationalized as "what you ate and drank" in the COVID-19 perceived impact scale. While 16.4% of respondents perceived a negative or very negative impact of the COVID-19 pandemic, 45.4% reported positive or very positive impacts. Girls and older adolescents were more likely to report (very) negative impacts and less likely to report (very) positive impacts. Migration background was only linked to a (very) positive perceived impact of the pandemic on dietary intake.

Trends in dietary intake and eating habits for both genders between 2006 and 2022 showed an increase in daily consumption of vegetables, a decrease in daily soft drink consumption and breakfast consumption on weeks days, as well as a stable daily consumption of sweets and fruits. With regards to the impact of the COVID-19 pandemic on the trends in adolescents' dietary intake and eating habits, there is an indication of a negative impact of the pandemic on the dietary intake (daily consumption of vegetables, fruits and sugary drinks) on girls and, subsequently, narrowing the gender gap.

Conclusions and perspectives

A positive or very positive perception of the impact of the COVID-19 pandemic is more often reported by adolescents than a negative or very negative impact. This can be seen as an possible indication that the majority of adolescents were able to use their resilience and their resources to prevent short and mid-term negative effects of the pandemic. However, there are differences in the perceived impact of the pandemic between subgroups of adolescents with girls, older adolescents and adolescents from a less affluent family background being consistently over-represented among groups who experienced a (very) negative impact.

Some changes in the trends are specific to the period between 2018 and 2022 and could be attributed to the pandemic, such as a general decrease in good classmate support, a decrease in girls reporting an excellent life satisfaction, an exceptionally high increase in multiple health complaints for girls and a negative impact on girls' dietary intake.

COVID-19 impact and trends from 2006-2022

COVID-19 impact and trends from 2006-2022

The COVID-19 pandemic and the related prevention measures led to major societal disruptions. Adolescents were confronted with these measures during a critical phase in their lives in which they face puberty and key developmental challenges, such as developing autonomy from their family and their social identity (Shaffer & Kipp, 2013). Some of the implemented measures, such as school closures, directly affected the daily lives and development of the adolescents. Schools are not only a place of formal education, but also the place where they meet their peers, socialise, practice physical activity, etc. In Luxembourg, a total of 49 days of full school closures were reported (World Health Organization, 2023), making Luxembourg one of the countries with the least school closures in Europe. Although school closures were relatively exceptional in Luxembourg in comparison to other countries, adolescents were affected by a broad set of social lockdown measures including alternating in-person and home schooling and restricted possibilities to socialise.

This report aims to better understand the impact the COVID-19 pandemic had on adolescents' life in two ways. The first goal is to describe the perception adolescents had of the impact of the COVID-19 pandemic. More specifically, we evaluated the impact the COVID-19 pandemic had on the following areas of their lives: life as a whole, future expectations, family financial situation, health, relationships with family, relationships with friends, mental health, school performance, physical activity and what they ate and drank. The second aim of this report is to observe how adolescents' health and health behaviour have evolved before and through the pandemic.

The present report includes a total of 42 127 pupils aged 11 to 18 [n(2006)=8 798; n(2010)=9 516; n(2014)=7 233; n(2018)=8 687; n(2022)=7 893]. In 2022, the 7 893 pupils included were attending Luxembourg public and private schools whose teaching is based on the national curriculum[1]. The trend results presented in this report are based on the descriptive and independent results that have been published by the HBSC study Luxembourg for waves 2006, 2010, 2014, 2018 and 2022 on the website (hbsc.lu). These results provide an overview on the impact of the COVID-19 pandemic on adolescents' health and health behaviour between 2018 and 2022 in comparison to the evolution between 2006 and 2018[2]. Trends from 2006 to 2022 are, thus presented with a focus on evolutions that occurred after 2018 and interpreted in relation to the previously presented COVID-19 impact in different areas of their lives. The trends of the following variables will be presented: self-rated health, communication with father and mother, classmate support, life satisfaction, multiple health complaints, schoolwork pressure, teacher support, vigorous physical activity (VPA), moderate-to-vigorous physical activity (MVPA), vegetable consumption, fruit consumption, sweet consumption, soft drink consumption and breakfast consumption on weekdays.

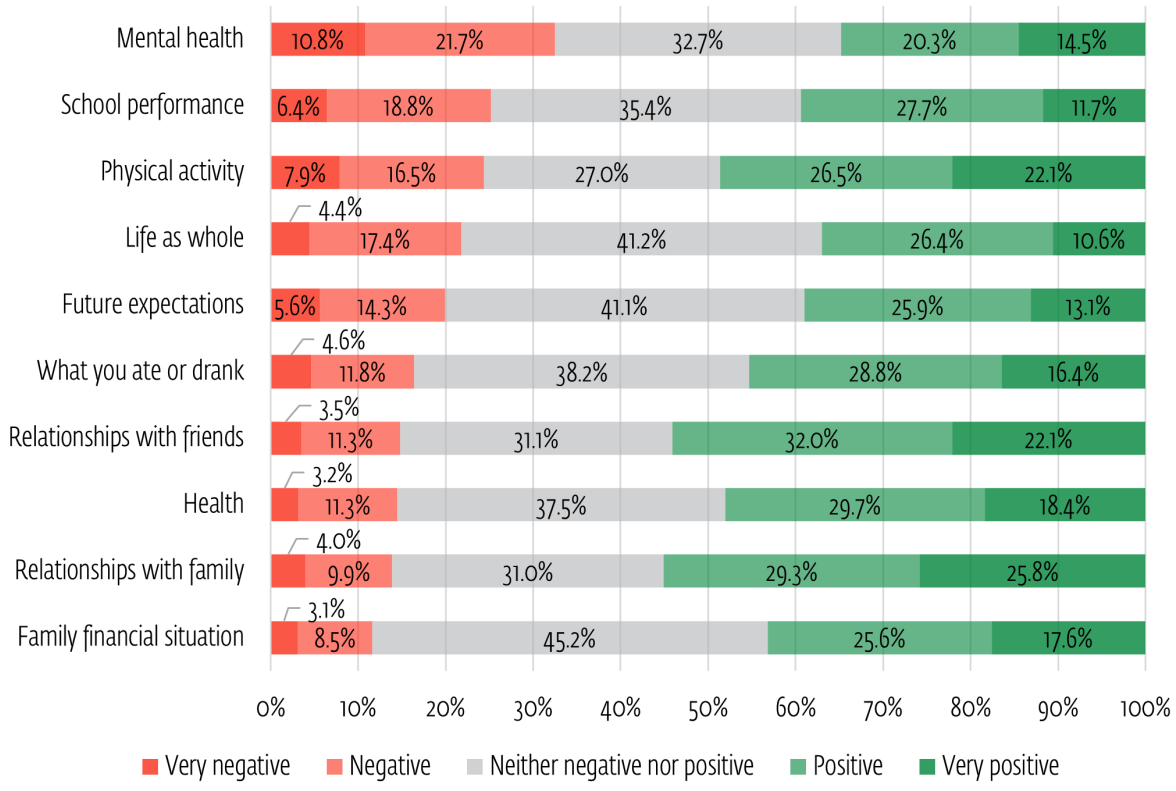
[1] For more information on the population, please refer to Catunda, Mendes, and Lopes Ferreira (2023) and Heinz et al. (2020).
[2] A multivariate multilevel regression and in-depth analysis of the pooled waves from 2006 to 2022 might yield slightly different results, but at the time of writing those analyses were not available.

Overall impact of the COVID-19 pandemic

In order to understand the overall impact of the COVID-19 pandemic on adolescents' lives, the HBSC questionnaire included a set of ten items for the adolescents to assess its impact. These items were related to adolescents' life as a whole, family financial situation, future expectations, health, relationships with family, relationships with friends, mental health, school performance, physical activity and dietary intake. Each item relied on a 5-point scale ranging from 1 ("very negative") to 5 ("very positive").

Figure 1 displays an overview of the perceived impact of the COVID-19 pandemic on different adolescents' areas of life. Mental health and school performance were the two areas of life most negatively impacted by the pandemic, with respectively 32.5% and 25.2% of the respondents perceiving the impact as negative or very negative. On the opposite, relationships with family and relationships with friends were the most positively impacted areas, with respectively 55.1% and 54.1% responding as to the pandemic having either a positive or very positive impact. Perceived impact of the COVID-19 pandemic on physical activity was polarized with both the third highest proportion of adolescents reporting negative and positive impacts.

Figure 1: Overview of the perceived impact of the COVID-19 pandemic



Similarly to the results found in Luxembourg, a WHO report including 22 European countries shows that adolescents perceived more frequently a negative impact in the areas of mental health, physical activity, and school performance.

In addition, the positive impacts were more frequently related to the relationships with family and friends (Residori et al., 2023).

In 2021, the "Young People and Covid-19" (YAC) study asked youth about the perceived impact of the COVID-19 pandemic in 8 of the aforementioned areas of life, the items on physical activity and dietary intake not being part of the scale in 2021 (Schomaker et al., 2021). Although for the 12- to 17-year-olds[3] in the 2021 YAC study negative perceived impacts of the pandemic were a little more frequent and positive perceived impacts a lot less frequent than in the 2022 HBSC study, the areas of life with the most negative and positive perceived impact were similar (Residori et al., 2021). Mental health was the area with the most negative perceived impact in 2021, while relationships with family and relationships with friends were the two areas with the most positive perceived impact. For school performance, the perceived impact was more polarized in 2021 than in 2022: it was the area of life with both the third highest proportion of adolescents reporting negative impacts as well as the area of life with the third highest proportion of adolescents reporting positive impacts.

We counted the response to the individual areas of life in order to have a general assessment of the pandemic impact. As such, Figure 2 and Figure 3 present the percentage of individuals having selected either 1-5 or 6-10 negative/very negative or positive/very positive response options for the examined ten items.

Results show that 9.9% of the respondents reported a negative impact of the pandemic for at least 6 out of 10 areas of life, reflecting a very negative overall impact of the pandemic (Figure 2). In comparison, 40.6% of the respondents selected at least 6 out of 10 positive response options reflecting a very positive overall impact of the pandemic (Figure 3). Girls, older adolescents and those from a lower family affluence were more likely to report a very negative overall impact compared to boys, younger adolescents and those from a higher family affluence. Nearly twice the proportion of adolescents in the *voie préparatoire* (16.1%) reported a very negative overall impact of the pandemic compared to pupils in other lower classes (9.2% and 8.4%). Adolescents living with both parents were less likely to report a very negative overall impact of the pandemic than adolescents living in other family constellations (Figure 29 and Table 1 in the appendix).

Differences in reporting very positive overall impact are less pronounced. Boys, younger adolescents and those from a higher family affluence are more likely to report a very positive overall impact compared to girls, older adolescents and those from a lower family affluence (Figure 3 and see also Figure 30 and Table 2 in the appendix).

These results corroborate international findings. Overall, girls, older adolescents and adolescents with lower family affluence reported less frequently positive impacts in most areas of their lives, compared with boys, and adolescents with higher family affluence (Residori et al., 2023). Additionally, the 15-year-old adolescents from Luxembourg perceived less often positive impacts in most of the areas of their lives compared with the 11- and 13-year-olds. In comparison to the overall mean of the other European countries, girls and boys in Luxembourg perceived more often a positive impact in six or more areas and less often a negative impact. In addition, adolescents in Luxembourg reported more frequently positive impacts in comparison with the mean of the 22 countries. Finally, when compared

[3] The "Young People and Covid-19" (YAC) study surveyed 12- to 29-year-olds, but reports the results for 12- to 14-year-olds as well as 15- to 17-year-olds (Residori et al. 2021) The results reported in the present report from the YAC study are calculations for 12- to 17-year-olds based on the results reported in the YAC key data report (Residori et al. 2021). When differences by gender, age, migration or family affluence from the YAC study are referred to in following chapters of the present report, they pertain to the differences in the mean of the 12- to 29- year-olds surveyed in the YAC study.

with the overall mean of all the countries, the WHO report shows that the difference of the impact of the Covid-19 pandemic according to the family affluence in Luxembourg is more pronounced (Residori et al., 2023).

Figure 2: Negative overall impact of the COVID-19 pandemic

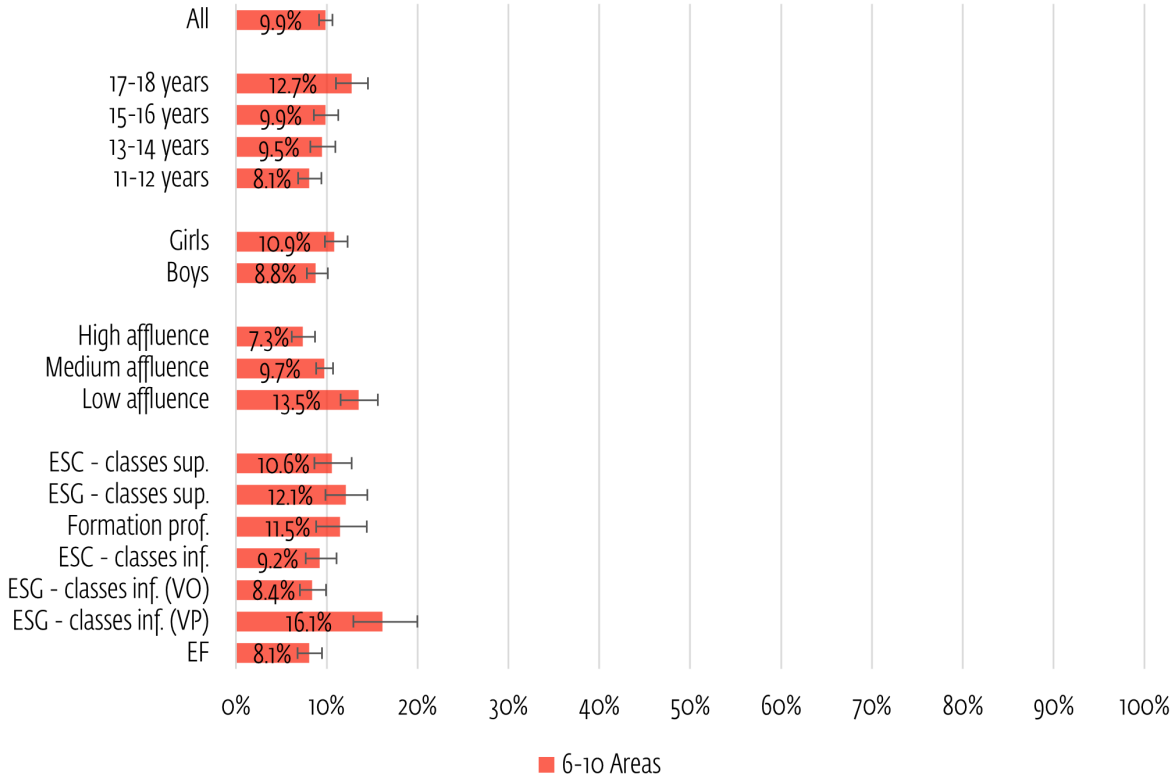
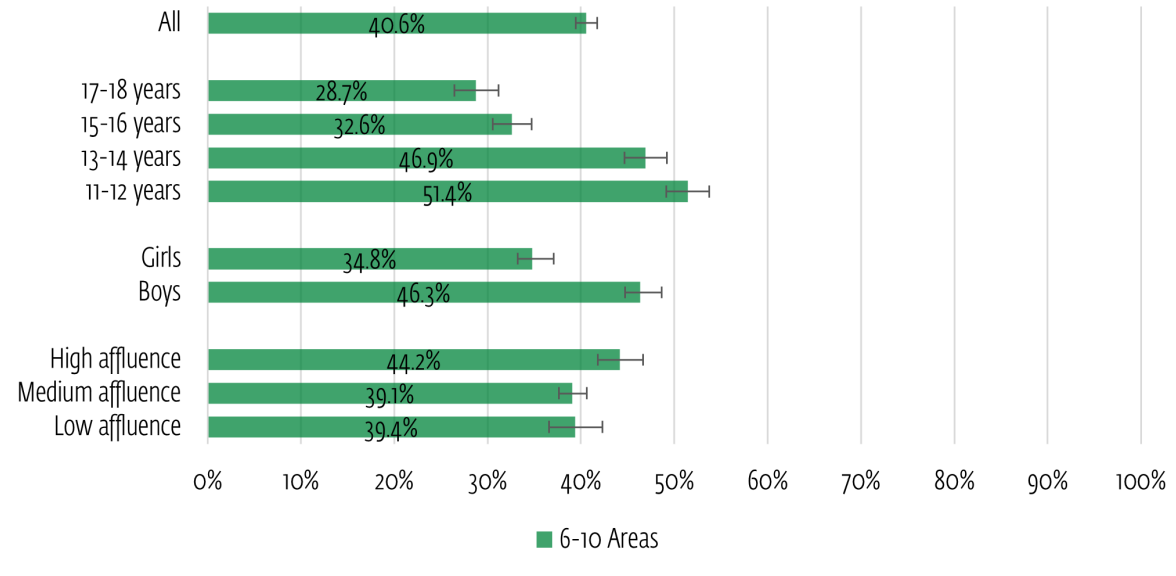


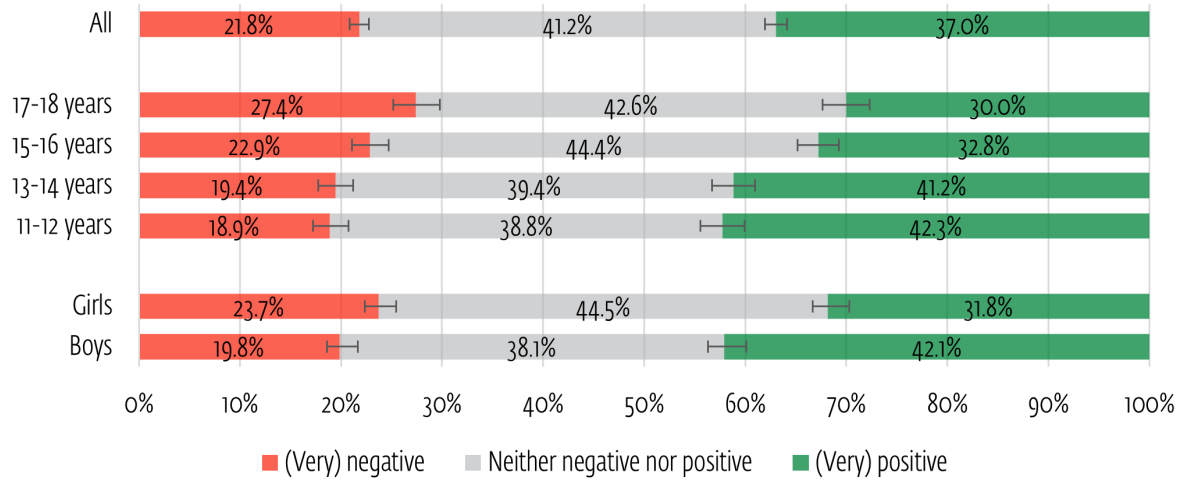
Figure 3: Positive overall impact of the COVID-19 pandemic



The impact of the COVID-19 pandemic on adolescent's life as a whole

When asked about the perceived impact of the COVID-19 pandemic on their life as a whole, 21.8% of adolescents reported a negative or very negative impact while 37% of adolescents reported a positive or very positive impact. Responses to this item varied with gender and age (Figure 4). Overall, boys and adolescents aged 11 to 14 years old appeared more positively and less negatively impacted than their respective counterparts. This age pattern was partly reflected in the specific prevalence pertaining to the types of school (see the appendix Figure 31 and Table 3).

Figure 4: COVID-19 pandemic impact on adolescents' life as a whole



The perceived impact of the pandemic on adolescents' life as a whole was unrelated to migration background but limitedly linked to family affluence and family structure (see Figure 31 and Table 3 in the appendix). The percentage of adolescents reporting a (very) positive impact on their life as a whole was higher in adolescents from high family affluence (41%) than in their counterparts from low (34.4%) and medium family affluence (36%). In addition, adolescents living with both parents were more likely to report a (very) positive impact than those living with a single parent (38.2% vs. 32.8%).

Social support seems to have an influence on adolescents' perception of the impact of the pandemic. Eriksson and colleagues (2023) observed that a positive COVID-19 impact on life as a whole was reported more often by adolescents who perceive high social support. Conversely, those who perceived lower social support also perceived negative impacts more often.

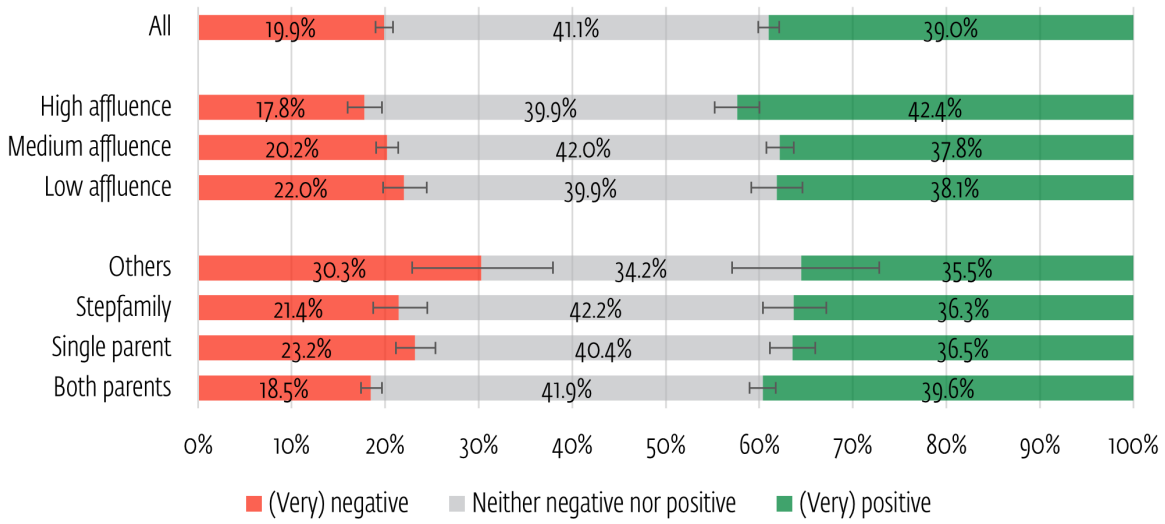
In comparison to the 2021 YAC study, in which approximately 16% of 12- to 17-year-olds reported (very) positive impact of the COVID-19 pandemic on life as a whole, the perceived (very) positive impact has more than doubled in 2022 (see Figure 4; Residori et al., 2021). On the opposite side of the scale, the perceived (very) negative impact seems to have decreased in 2022 in comparison to the about 30% of adolescents reporting (very negative) impact of the COVID-19 pandemic in the 2021 YAC study. Differences by gender, age and family affluence were also detected in 2021.

The impact of the COVID-19 pandemic on adolescents' future expectations

The results for the adolescents' future expectations are similar to the results for life as a whole with 19.9% reporting a negative or very negative impact of the COVID-19 pandemic and 39% reporting a positive or very positive impact.

Results showed that adolescents of high family affluence tended to report more (very) positive and fewer (very) negative impacts of the COVID-19 pandemic on their future expectations than their counterparts (Figure 5). For example, 42.4% of the respondents of high family affluence indicated that the pandemic had a (very) positive impact on their future expectations, against 38.1% and 37.8% in adolescents of low and medium family affluence, respectively. The family structure has shown statistically significant differences as well: they mainly involved comparisons between adolescents living with both parents and those living with a single parent. For instance, 18.5% of the respondents living with both parents reported a (very) negative impact, against 23.2% of those living with a single parent (Figure 5). Migration background was uninfluential here (Figure 32 and Table 4 in the appendix).

Figure 5: COVID-19 pandemic impact on adolescents' future expectations



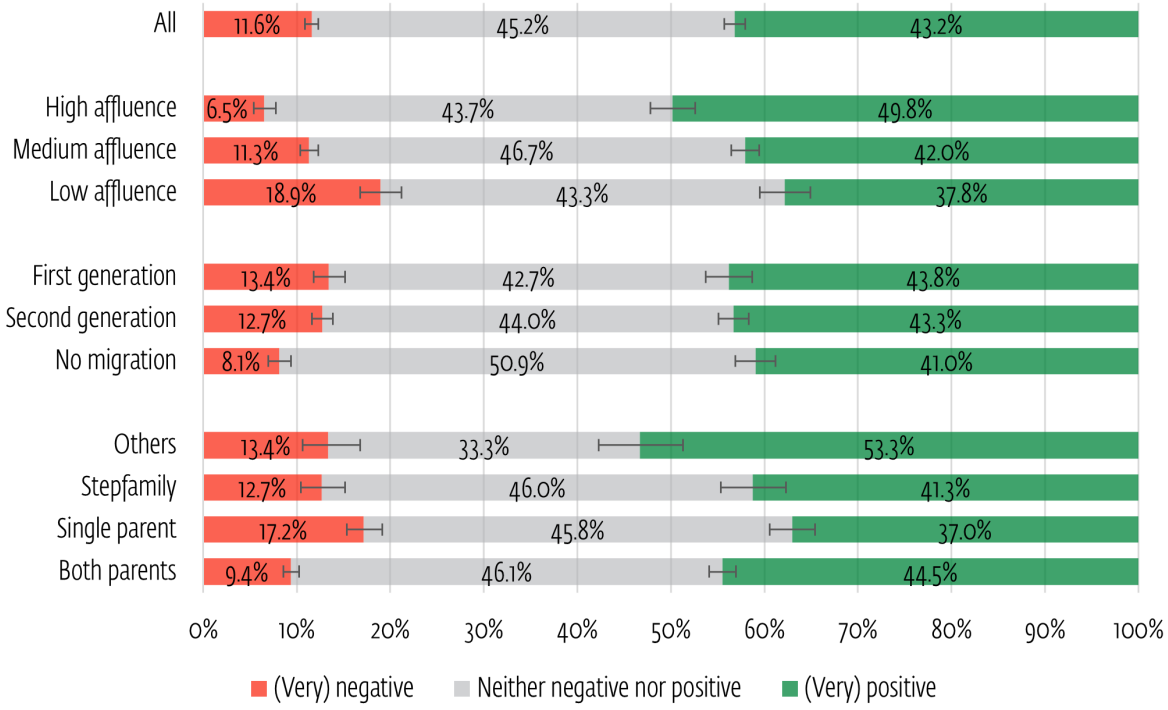
Perceptions of the pandemic's impact on future expectations also varied with gender, age, and the type of school. Boys and younger adolescents were more likely to report a (very) positive impact and less likely to report a (very) negative one (see the appendix Figure 32 and Table 4). The distribution of the responses related to the type of school may partly reflect the age difference and the link between the type of school and parents' socioeconomic status.

The proportion of adolescents reporting a perceived (very) positive impact increased in 2022 compared to the YAC study 2021 in a similar pattern than for the area life as a whole. However, the proportion of adolescents reporting a perceived (very) negative impact in 2022 was stable compared to the approximative 20% of 12- to 17-year old adolescents reporting (very) negative impacts of the COVID-19 pandemic on their future expectations in the 2021 YAC study (Residori et al., 2021). Similar differences by gender, age and family affluence were also present in 2021.

The impact of the COVID-19 pandemic on adolescent's family financial situation

The percentage of adolescents reporting a negative or very negative impact of the COVID-19 pandemic on their family's financial situation was higher among respondents of low family affluence and among those living with a single parent (Figure 6). As an illustration, 18.9% adolescents from low family affluence reported a (very) negative impact, more than double of what was reported by adolescents from high family affluence (6.5%). Similarly, for adolescents living with both parents, the corresponding percentage was 9.4% against 17.2% for respondents from a single-parent family. On the opposite side of the scale, the percentage of adolescents reporting a (very) positive impact was higher among respondents of high affluence and among those living with both parents (Figure 6).

Figure 6: COVID-19 pandemic impact on adolescents' family financial situation



The perceived impact of the COVID-19 pandemic on the family's financial situation involved two statistically significant differences by migration background. Both distinguish between adolescents with no migration background and the first- and second-generation migrants. The former were less likely to report a (very) negative impact and more likely to select the (very) positive response options than the latter (see the appendix Figure 33 and Table 5).

The perceived impact of the pandemic on the family's financial situation also varied with gender and age. The differences observed here followed the general patterns described previously. In addition, it should be noted that the distribution of the responses related to the type of school may partly depend on the link between type of school and family affluence (the corresponding Table 5 and Figure 33 can be found in the appendix).

In comparison to the 2021 YAC study, in which approximately 12% of 12- to 17-year-olds reported (very) negative impacts of the COVID-19 pandemic on their family's financial situation, the proportion of adolescents reporting a perceived (very) negative impact remains stable (Residori et al., 2021). On the other hand, the proportion of adolescents reporting a perceived (very) positive impact doubled in 2022 compared to the approximate 20% in the YAC study 2021. Differences by family affluence, migration background and age were also present in 2021.

Health

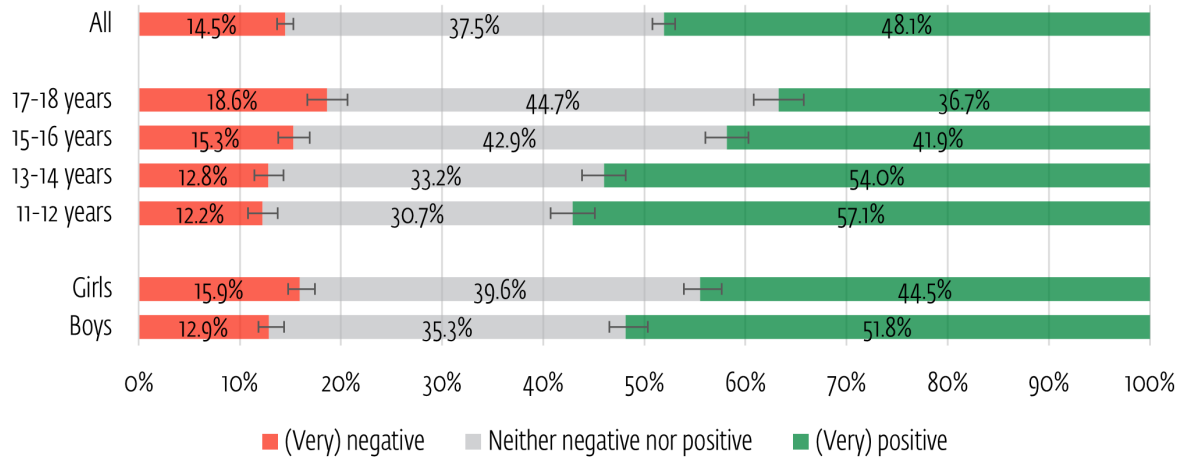
The impact of the COVID-19 pandemic on adolescents' health

Adolescents were asked about the impact of the COVID-19 pandemic on their health and on their mental health. Consequently, it is probable that many adolescents interpreted "health" as physical health in contrast to "mental health". With 48,1%, almost half of the adolescents reported a positive or very positive impact of the pandemic on their health, while 14,5% reported a negative or very negative impact.

Adolescents' perceptions of the impact of the COVID-19 pandemic on their health varied with gender and age with more pronounced differences for a (very) positive impact than for a (very) negative impact (Figure 7). Boys and younger respondents reported (very) positive impacts in larger proportions than girls and older respondents. These perceptions were also linked to the type of school: although most of the differences observed were likely linked to the age, results showed that pupils from the ESC *classes supérieures* were the most prone to select the neutral option response and the less inclined to report a (very) positive impact on their health (see the appendix Figure 34 and Table 6).

The perceived (very) positive impact of the pandemic on health was linked to migration background with adolescents without migration background being more likely to select the neutral option response and less inclined to report a (very) positive impact. Family affluence was less influential for this area of life and family structure was uninfluential (see the appendix Figure 34 and Table 6).

Figure 7: COVID-19 pandemic impact on adolescents' health



In comparison to the 2021 YAC study, in which about 12% of 12- to 17-year-olds reported (very) negative impacts of the COVID-19 pandemic on their health (Residori et al., 2021), the proportion of adolescents reporting a perceived (very) negative impact in the 2022 HBSC study can be considered as stable with a tentative indication of an increase. However, the proportion of adolescents reporting a perceived (very) positive impact doubled from approximatively

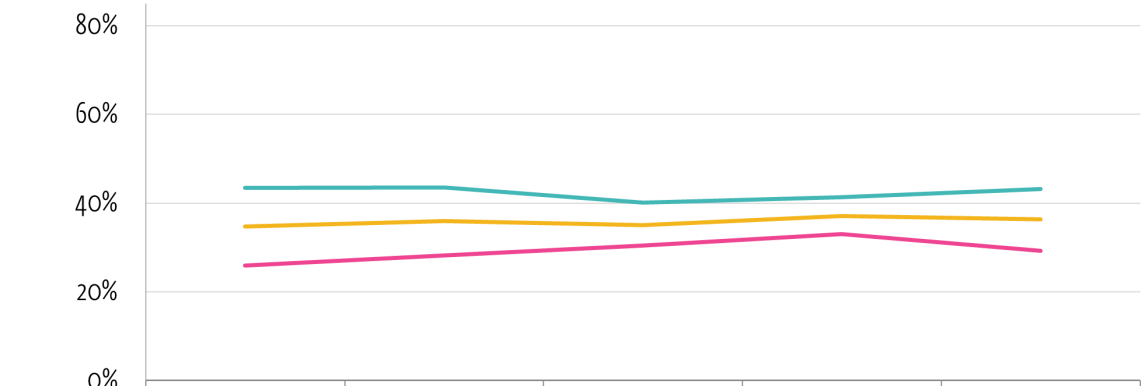
24% in the YAC study 2021 to 48.1% in the present study. Differences by age and, to a lesser extent, by family affluence were as well observed in 2021.

Trends in self-rated health

For the HBSC study Luxembourg, adolescents aged 11 to 18 years old were asked about their health and health behaviour in 2006, 2010, 2014, 2018 and 2022. The results presented in this report are based on the results published on the website hbsc.lu. These results allow us to provide a general description of the trends in adolescents health and health behaviour between 2006 and 2022. In addition, they provide a first assessment of the impact of the COVID-19 pandemic on adolescents' health and health behaviour by comparing the evolution between 2018 and 2022 to the evolution in the previous years.

Adolescents were invited to rate their health based on four response categories: "excellent", "good", "fair", and "poor". Figure 8 displays the percentage of adolescents assessing their health as excellent.

Figure 8: Trends in excellent health



	2006	2010	2014	2018	2022
Overall	35%	36%	35%	37%	36%
Boys	43%	44%	40%	41%	43%
Girls	26%	28%	30%	33%	29%

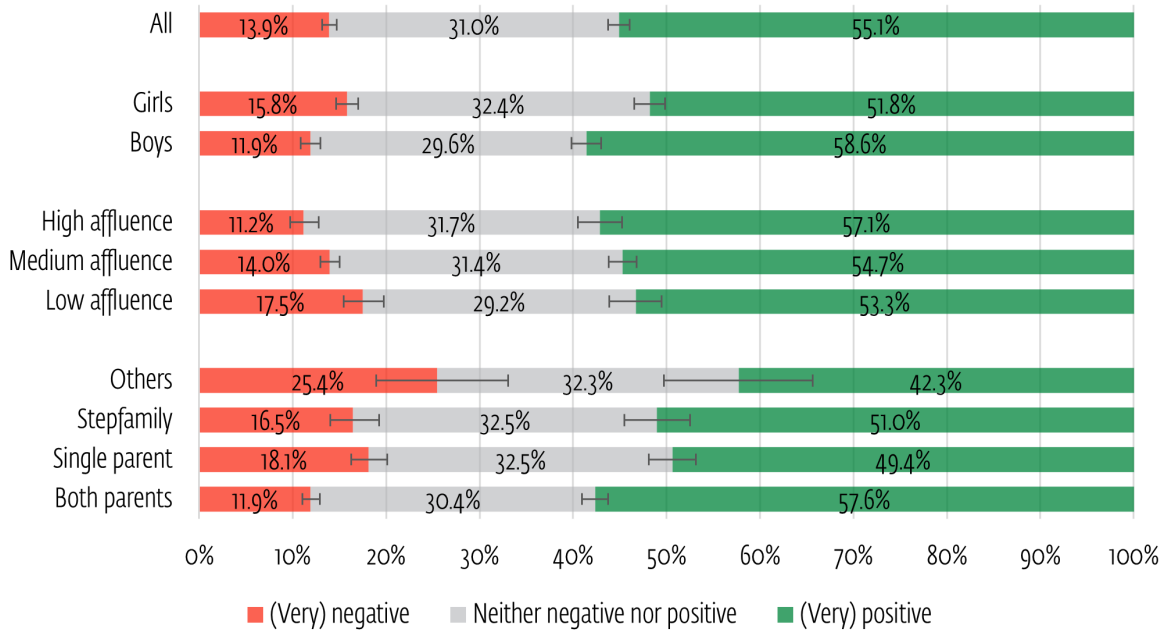
The percentage of adolescents rating their own health as excellent has been stable since 2006, with a small decrease for girls between 2018 and 2022. Pronounced gender differences were found for all waves, with boys having consistently selected the response option "excellent" in higher proportions than girls. No clear impact of the COVID-19 pandemic on the self-rated health of adolescents was identified based on these observations.

Relationships with family

The impact of the COVID-19 pandemic on adolescent's relationships with family

The relationship with their family was one of the areas of life for which adolescents were asked to indicate whether the COVID-19 pandemic had a (very) positive, neutral or (very) negative impact on it. 55.1% of adolescents reported a (very) positive impact of the pandemic on their relationship with their family and 13.9% reported a (very) negative impact. Thus, the relationships with family were the most positively impacted area of adolescents' life and the second least negatively impacted by the pandemic.

Figure 9: COVID-19 pandemic impact on adolescents' relationships with family



Family affluence was negatively associated with a (very) negative perceived impact on family relationships. For instance, 17.5% of the respondents of low family affluence selected one of the two negative option responses, while this percentage was 11.2% in adolescents of high family affluence (Figure 9). Respondents living with both parents reported fewer negative impacts (11.9%) and more positive impacts (57.6%) than those living within a stepfamily (16.5% and 51%, respectively) or with a single parent (18.1% and 49.4%, respectively; see Figure 9). Migration background was not significantly associated with the perceived impact of the pandemic on adolescents' family relationships (appendix Figure 35 and Table 7).

Gender and age were linked to the perceptions of the impact of the pandemic on adolescents' family relationships. Here again, boys and younger adolescents reported (very) positive impacts to a larger extent than their counterparts. The link between type of school and the perceived impact on family relations partly reflected the link between the latter and age. In addition, the results showed that a larger proportion of adolescents in the *voie préparatoire* (20.6%)

reported a (very) negative impact of the pandemic compared to pupils in other lower classes (13.5% and 12.8%; see the appendix Figure 35 and Table 7).

In general, the adolescent's perception of the COVID-19 pandemic impact varied according to the type and volume of social support, with family support being the most important source of support (Eriksson et al., 2023). Differences in the perception of COVID-19 impact between those reporting low *vs.* high family support were bigger in Luxembourg when compared to the mean of the 22 countries participating in the study (Eriksson et al., 2023). Additionally, adolescents in Luxembourg who perceived negative impacts of COVID-19 on their relationships with their family more often reported low life satisfaction when compared to other countries (Cosma et al., 2023).

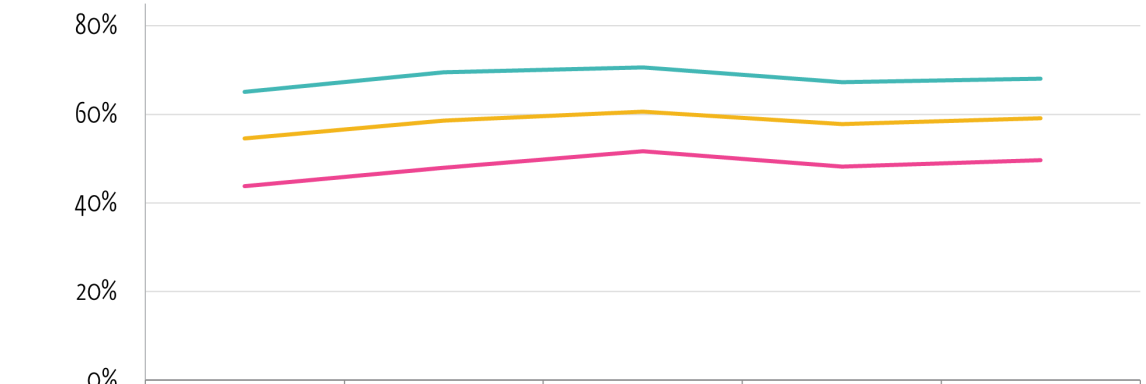
In comparison with the 2021 YAC study, in which approximately 33% of 12- to 17-year-olds reported a (very) positive impact of the COVID-19 pandemic on their relationships with their family (Residori et al., 2021), the perceived (very) positive impact has markedly increased in 2022. On the opposite side of the scale, the perceived (very) negative impact seems to have been stable in 2022 in comparison to the approximately 15% adolescents reporting (very negative) impact of the COVID-19 pandemic in the 2021 YAC study. Differences by gender, age and family affluence were also detected in 2021.

Trends in communication with parents

In 2006, 2010, 2014, 2018 and 2022 respondents were asked to indicate how easy it was to talk to their father and to their mother about things that really bothered them. Five response options were available: "very easy", "easy", "difficult", "very difficult", and "don't have or see this person".

Figure 10 reports the findings pertaining to the ease of communication with their father; Figure 11, those pertaining to the ease of communication with their mother. Both graphs report the prevalence of adolescents who communicate easily or very easily with the concerned people.

Figure 10: Trends in (very) easy communication with father

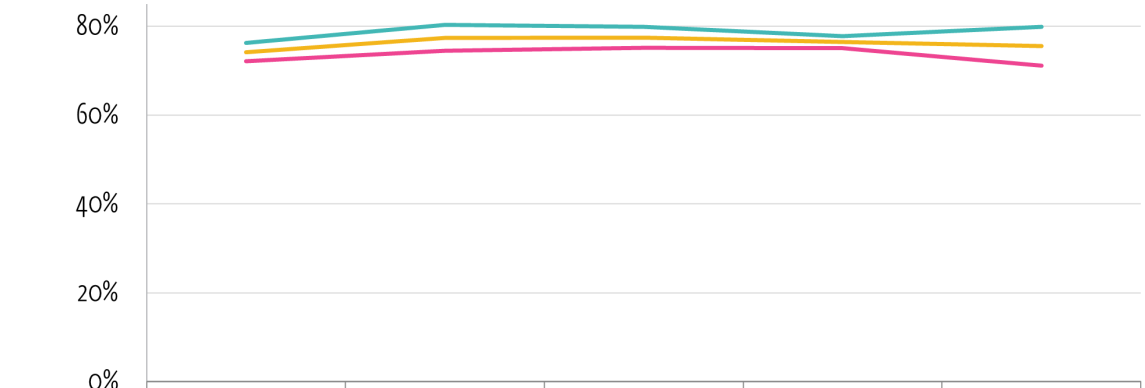


	2006	2010	2014	2018	2022
Overall	55%	59%	61%	58%	59%
Boys	65%	70%	71%	67%	68%
Girls	44%	48%	52%	48%	50%

The ease of communication with the father has slightly increased between 2006 and 2022 (see Figure 10). A peak was reached in 2014 for both genders. The ease of communication with the father varied with gender. The corresponding prevalence has consistently been markedly higher in boys, with a gap of 20 percentage points on average. No clear impact of the COVID-19 pandemic on the ease of communication with the father was identified based on these observations.

The ease of communication with the mother has remained quite stable over time (Figure 11). In boys, the corresponding prevalence has slightly increased from 2006 to 2022. Here again, the ease of communication was higher in boys than in girls. However, the gap between boys and girls was smaller than the one related to the ease of communication with their father. Overall, communicating with their mother was easier for adolescents than communicating with their father, irrespective of gender and of the examined period of time. No clear impact of the COVID-19 pandemic on the ease of communication with the mother was identified based on these observations, but the gap between the boys and girls is at its highest in 2022.

Figure 11: Trends in (very) easy communication with mother



	2006	2010	2014	2018	2022
Overall	74%	77%	77%	76%	76%
Boys	76%	80%	80%	78%	80%
Girls	72%	74%	75%	75%	71%

Relationships with friends

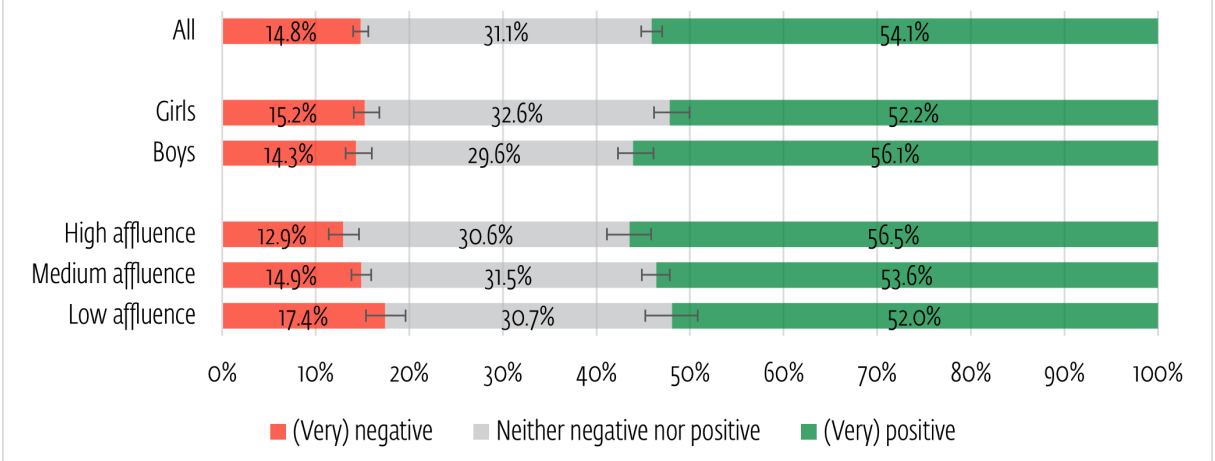
The impact of the COVID-19 pandemic on adolescents' relationships with friends

The relations with friends were the area of life with the second highest proportion of respondents reporting a positive or very positive impact from the COVID-19 pandemic, with 54.1%. On the other side of the scale, 14.8% of the respondents reported a negative or very negative impact.

The impact of the pandemic on adolescents' relationships with friends varied with gender (Figure 12), with boys reporting a (very) positive impact more frequently than girls (56.1% vs. 52.2%). For girls, the perception of the impact on these relations varied by age with younger girls being more likely to report a (very) positive impact on their relationships with peers than older girls (see the appendix Figure 36 and Table 8). The differences by age were not statistically significant for boys. The distribution of the responses by type of school mostly reflected these trends by age (see Figure 36 and Table 8 on the appendix).

The percentage of adolescents reporting a (very) negative impact on their relationships with friends was higher in respondents of low family affluence (17.4%) than those of medium (14.9%) and high (12.9%) family affluence (Figure 12). Both family structure and migration background were not related to the perceived impact of the pandemic on relationships with friends (see the appendix Figure 36 and Table 8).

Figure 12: COVID-19 pandemic impact on adolescents' relationships with friends



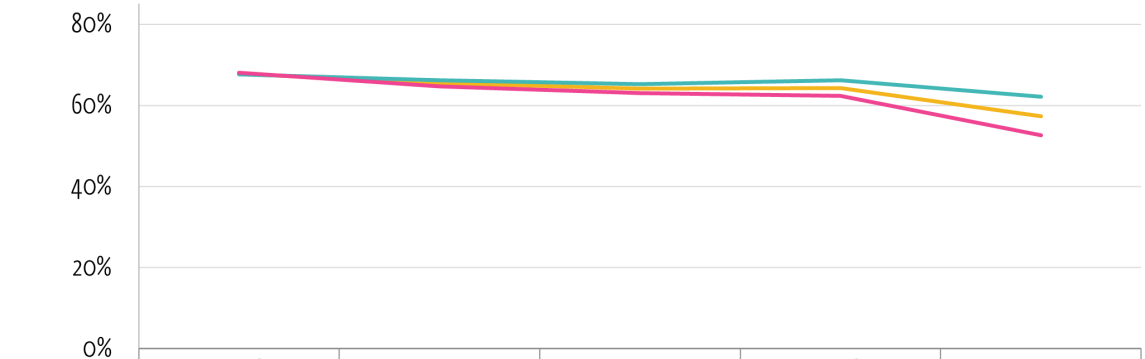
The proportion of adolescents reporting a (very) negative impact of the COVID-19 pandemic on their relationship with their friends in 2022 HBSC study has dropped compared to the circa 25% of 12- to 17-year old adolescents reporting a (very) negative impact in the 2021 YAC study (Residori et al., 2021). The proportion of adolescents reporting a perceived (very) positive impact nearly doubled in 2022 HBSC study compared to 2021. Differences by age, family affluence and migration background were also observed in 2021.

Adolescents who reported a negative impact of the COVID-19 pandemic on their relationship with family and friends were more prone to experience low life satisfaction and high levels of psychological and physical health complaints (Cosma et al., 2023). A WHO report shows that Luxembourg was among the countries exhibiting the largest gap between genders in the link between perceived negative impact of the pandemic on relations and health complaints. In Luxembourg, more than in most other examined countries, girls who perceived negative impacts on their relationship with family and friends reported higher levels of psychological and physical health complaints than boys (Cosma et al., 2023).

Trends in classmate support

In addition to friends, classmates are a key part of adolecents' social environment. Classmate support is measured based on three items by asking participants whether (a) their classmates enjoy being together, (b) most of their classmates are kind and helpful, and (c) other students accept them as they are. These three items rely on a 1-5 rating scale ranging from "strongly disagree" to "strongly agree". The answers were added and then divided by 3 to create a classmate support mean score for all HBSC waves. Figure 13 reports the prevalence of pupils exhibiting a mean score above 4, which reflects a good classmate support.

Figure 13: Trends in good classmate support



	2006	2010	2014	2018	2022
Overall	68%	65%	64%	64%	57%
Boys	68%	66%	65%	66%	62%
Girls	68%	65%	63%	62%	53%

Figure 13 shows that the prevalence of adolescents reporting a good classmate support has decreased from 2006 to 2014, especially in girls, was stable between 2014 and 2018, and decreased in 2022. This recent decrease was particularly strong in girls (-9 percentage points from 2018 to 2022). The observed trends point towards a change in the perception of the classroom environment by adolescents. After disruptions in the relations with their classmates during the COVID-19 pandemic, the proportion of adolescents reporting their classmate support to be good is lower than ever (since 2006). Eventhough school closures were relatively exceptional in Luxembourg in comparison to other countries, the perceived class climate seems to have been affected by the pandemic (World Health Organization, 2023).

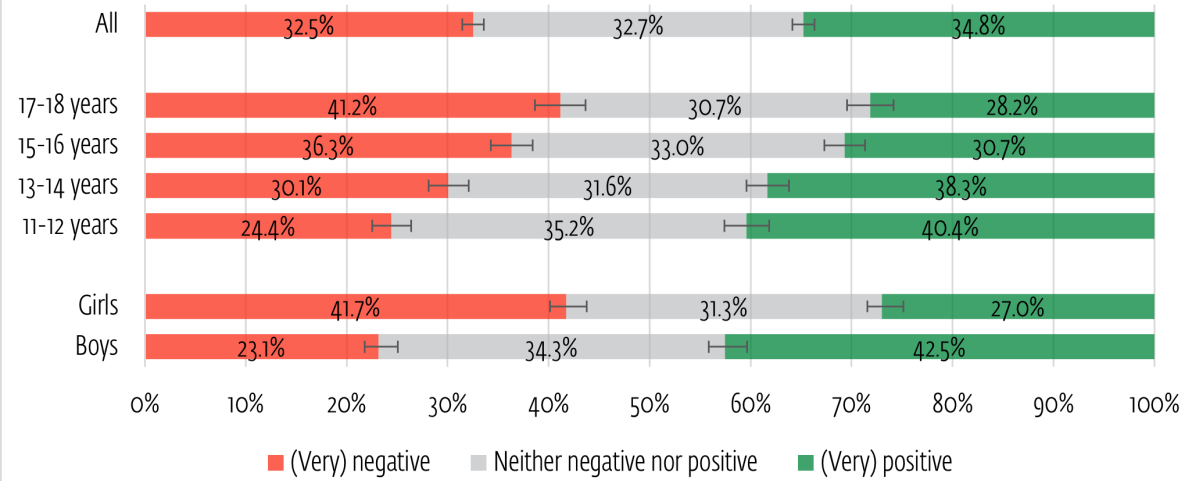
Mental health

The impact of the COVID-19 pandemic on adolescents' mental health

In addition to the perceived impact of the COVID-19 pandemic on health, adolescents were asked to indicate which impact the pandemic had on their mental health. With every third adolescents (32.5%) reporting a negative or very negative impact of the pandemic on their mental health, mental health is the domain involving the highest prevalence of reported (very) negative impact of all 10 areas of life (Figure 14). Despite the high level of perceived negative impact of the pandemic on mental health, a third of adolescents respectively reported a neutral (32.7%) or a positive (34.8%) perceived impact.

As shown in Figure 14, girls appeared to report a (very) negative impact of the pandemic on their mental health to a far larger extent than boys (41.7% vs. 23.1%). Reversely, boys reported a (very) positive impact to a far larger extent than girls (42.5% vs. 27%). The pandemic's implications on mental health also varied with age and the type of school. The observed patterns are similar to those described in the section dedicated to health.

Figure 14: COVID-19 pandemic impact on adolescents' mental health



Results related to family affluence, family structure, and migration background revealed patterns similar to the ones' seen up to now: the percentage of participants reporting a (very) negative impact was lower in adolescents of high family affluence and living with both parents than in their respective counterparts (see the Appendix Figure 37 and Table 9).

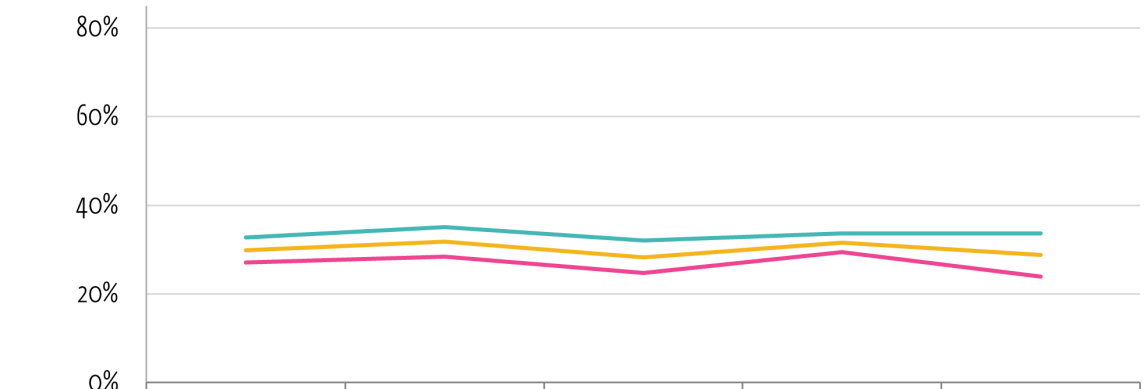
In comparison with the 2021 YAC study, the proportion of 12- to 17-year-olds reporting a (very) negative impact of the COVID-19 pandemic on their mental health in 2022 is stable (+- 34% in 2021; Residori et al., 2021). On the other hand, the proportion of adolescents reporting a (very) positive impact increased in 2022 compared to the approximately 20% in 2021. Differences by age, gender and family affluence were also observed in 2021.

At an international level, higher levels of perceived negative impact on mental health and well-being were more often reported by girls and 15 years old adolescents, compared to boys and 11- and 13-years-olds (Cosma et al., 2023). Compared to the mean of all the other countries studied, adolescents in Luxembourg reported more often positive impacts of the COVID-19 pandemic (5% point difference) on mental health and well-being and little less often negative impact (1% point difference). However, the gender difference was higher in Luxembourg compared to the mean of the other 22 studied countries, with the percentage of girls perceiving a negative impact of the pandemic being nearly the double than boys.

Trends in life satisfaction

The Cantril's ladder (Cantril, 1965) was used to measure life satisfaction in all HBSC Luxembourg waves. The instrument asks the respondents to indicate where they stand on a ladder ranging from 0, a point representing the "worst possible life" for them, to 10, a point representing the "best possible life" for them. Figure 15 reports the prevalence of adolescents exhibiting a high life satisfaction (i.e., the scores 9 and 10).

Figure 15: Trends in high life satisfaction



	2006	2010	2014	2018	2022
Overall	30%	32%	28%	32%	29%
Boys	33%	35%	32%	34%	34%
Girls	27%	28%	25%	29%	24%

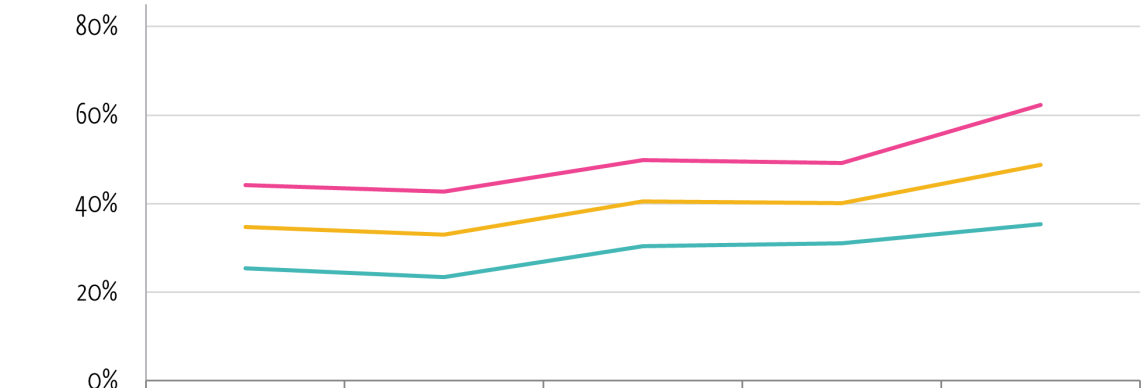
A higher percentage of boys reported a high life satisfaction every year, with the gender gap reaching its peak in 2022 (Figure 15). All waves considered, the prevalence of high life satisfaction has remained stable over time, despite some fluctuations. The biggest decrease observed for girls was between 2018 and 2022, with -5 percentage points. In addition, the proportion of girls reporting a low life satisfaction has increased from 16.0% to 21.0% between 2018 and 2022, whereas for boys it has remained stable with 11.2% and 12.0% for the same period. Therefore, these results suggest an impact of the COVID-19 pandemic on life satisfaction for girls.

Trends in multiple health complaints

The HBSC survey includes eight items pertaining to health complaints in every wave (Heinz et al., 2022). They relate to headache, stomachache, backache, feeling low, irritability or bad temper, feeling nervous, difficulties in getting to sleep, and feeling dizzy. Each item relies on a 1-5 rating scale ranging from "about every day" to "rarely or never". Figure 16 displays the percentage of adolescents having reported at least two health complaints "more than once a week" or "about every day".

The rate of adolescents having reported at least two health complaints "more than once a week" or "about every day" was stable between 2006 and 2010, increased in 2014, was stable until 2018, and increased again in 2022, especially in girls. Gender differences spanned about 20 percentage points from 2006 to 2018, but increased to about 30 percentage points in 2022.

Figure 16: Trends in Multiple Health Complaints



	2006	2010	2014	2018	2022
Overall	35%	33%	41%	40%	49%
Boys	25%	23%	30%	31%	35%
Girls	44%	43%	50%	49%	62%

Multiple health complaints in girls seem to have been impacted by the COVID-19 pandemic. While there have been increases before in the proportion of boys and girls reporting multiple health complaints, the magnitude of the increase between 2018 and 2022 is exceptionally high for girls (49% to 62%), the highest increase between any two other waves.

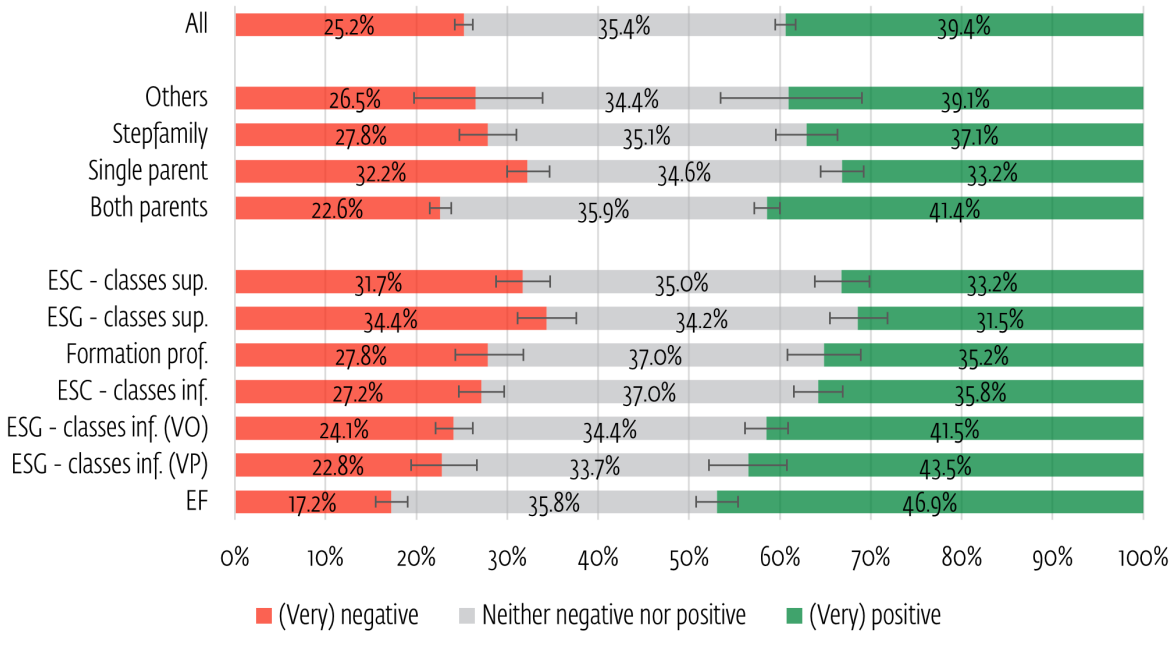
School performance

The impact of the COVID-19 pandemic on adolescent's school performance

With every fourth adolescents (25.2%) reporting a negative or very negative impact of the pandemic on their school performance, school performance is the area with the second highest prevalence of a (very) negative perceived impact of the pandemic (Figure 17). On the other hand, 39.4% of the respondents reported positive or very positive impacts of the pandemic on their school performance. School performance was the only examined area of life for which the perceived impact was unrelated to gender (see the appendix Figure 38 and Table 10). Age was negatively associated with the impact of the pandemic on school performance: results revealed a negative, linear relation between age for three age groups, that is, 11-12, 13-14, and 15-16 year old adolescents (see the appendix Figure 38 and Table 10). The younger an adolescent was, the higher the likelihood of them perceiving positive impact on their school performance. Results pertaining to the type of school reflected this age pattern.

The perceived impact of the pandemic on school performance varied according to family structure (Figure 17). 22.6% of the adolescents living with both parents reported a (very) negative impact, against 27.8% of those living within a stepfamily and 32.2% of those living with a single parent. Furthermore, 41.4% of the adolescents living with both parents reported a (very) positive impact, against 37.1% of those living within a stepfamily and 33.2% of those living with a single parent. For migration background, only one statistically significant pair difference was found. It regards the percentage of respondents reporting a (very) positive impact on school performance, which was lower in adolescents with no migration background (37.2%), compared to first-generation migrants (41.7%). Family affluence was uninfluential in this area of life.

Figure 17: COVID-19 pandemic impact on adolescents' school performance



In comparison to the 2021 YAC study (Residori et al., 2021), the proportion of adolescents reporting a perceived (very) negative impact on school performance was rather stable with a tentative indication of a decrease (approximately 29% in 2021 vs 25.2% in 2022), the proportion of adolescents reporting a perceived (very) positive impact increased markedly from circa 27% in 2021 to 39.4% in the present report.

Regarding school context, a negative or very negative impact on school performance was perceived by more than a quarter of adolescents of the 22 countries included in a recent WHO report, with girls and 15-year-old adolescents being more likely to be part of this group (Elgar et al., 2023). Almost a fifth of adolescents reported liking school and a half of the adolescents reported feeling some or a lot of school pressure. Adolescents from high family affluence reported less often a negative impact of the COVID-19 pandemic on school performance, but they were more likely to experience school pressure and less likely to like school. Moreover, adolescents who experienced more social support from classmates and teachers reported less often negative impacts on school performance and school pressure as well as liking school more often. During the COVID-19 pandemic, adolescents experienced school closures. This report took into account full school closures (no teaching in person at all levels), according to the WHO Public Health and Social Measures (PHSM). Across the 22 countries, adolescents who experienced more school closures were more likely to report some or a lot of school pressure. However, school closure was not associated with the perceived impact on school performance nor with liking school. Adolescents in Luxembourg experienced relatively few days of school closures (49 days vs mean of 138 days for the 22 countries; Elgar et al., 2023).

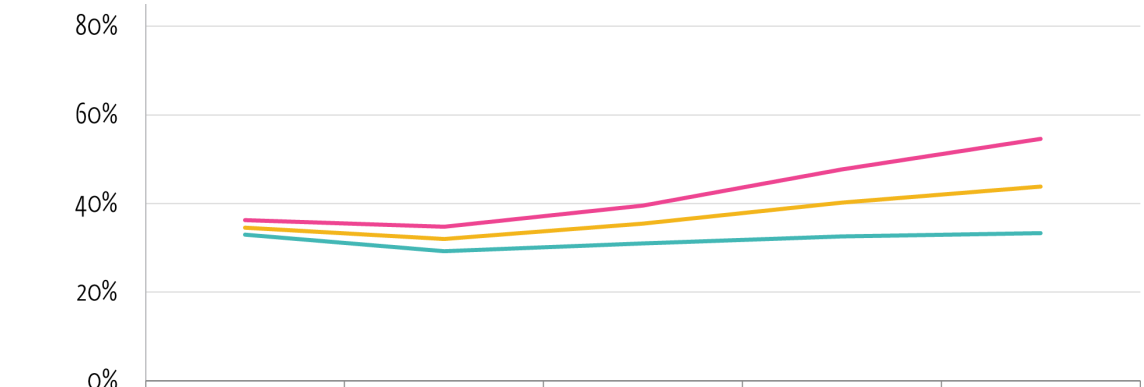
Furthermore, adolescents who reported a negative impact of the COVID-19 pandemic on school performance, relationships with family and relationships with friends were more prone to experience low life satisfaction and high levels of psychological and physical health complaints. For instance, the probability of reporting high levels of physical health complaints was significantly higher for girls who perceived a negative impact of the pandemic on school performance than for boys. In fact, Luxembourg was one of the countries with the highest gender disparity in that aspect. Girls who perceived a negative impact on school performance were also more likely to report high levels of psychological health complaints than boys, however this gender difference, although important, was close to the mean of the other 22 countries (Cosma et al., 2023).

Trends in schoolwork pressure

Schoolwork pressure is measured based on a single item asking adolescents to indicate how pressured they feel by the schoolwork they have to do. The item involves a 1-4 rating scale ranging from "not at all" to "a lot". Figure 18 displays the percentage of adolescents reporting having felt some or a lot of pressure between 2006 and 2022.

After a decrease between 2006 and 2010, the prevalence of adolescents reporting having felt some or a lot of schoolwork pressure has increased ever since. A peak was reached in 2022. This upwards trend has been quasi linear since 2010 and is, therefore, unlikely to be linked to the COVID-19 pandemic. This increase was much stronger in girls than in boys and the gender gap has steadily increased since 2006 (Figure 18).

Figure 18: Trends in feeling some or a lot of schoolwork pressure

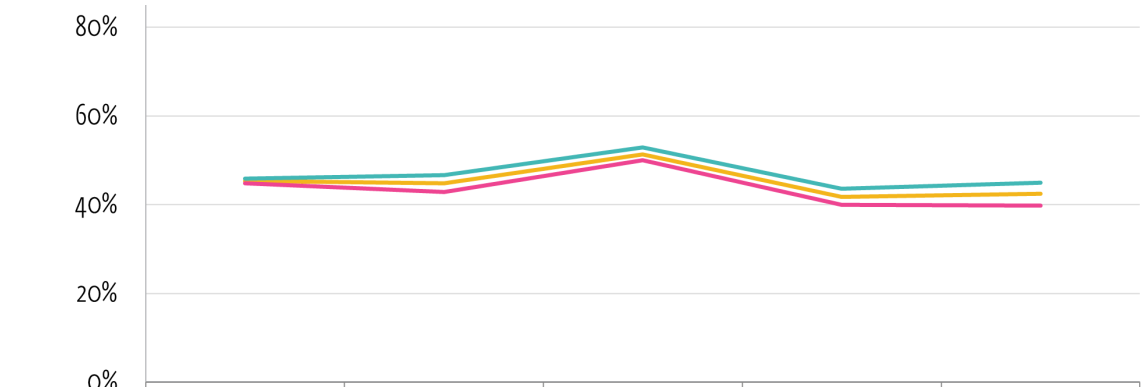


	2006	2010	2014	2018	2022
Overall	35%	32%	35%	40%	44%
Boys	33%	29%	31%	33%	33%
Girls	36%	35%	40%	48%	55%

Trends in teacher support

The assessment of teacher support was based on adolescents's answers for their level of agreement with the following statement "I feel that my teachers care about me as a person" on a 1-5 rating scale ranging from "strongly agree" to "strongly disagree". Figure 19 presents the prevalence of adolescents that (strongly) agreed with the abovementioned statement.

Figure 19: Trends in good teacher support



	2006	2010	2014	2018	2022
Overall	45%	45%	51%	42%	42%
Boys	46%	47%	53%	44%	45%
Girls	45%	43%	50%	40%	40%

The percentage of adolescents experiencing positive teacher support was stable between 2006 and 2010, increased in 2014, decreased in 2018, and remained stable ever since. Except for 2006, the corresponding prevalence was higher in boys than in girls (Figure 19). With similar patterns of change between 2006 and 2010 as well as 2018 and 2022, none of these fluctuations seem to be specific to the COVID-19 pandemic.

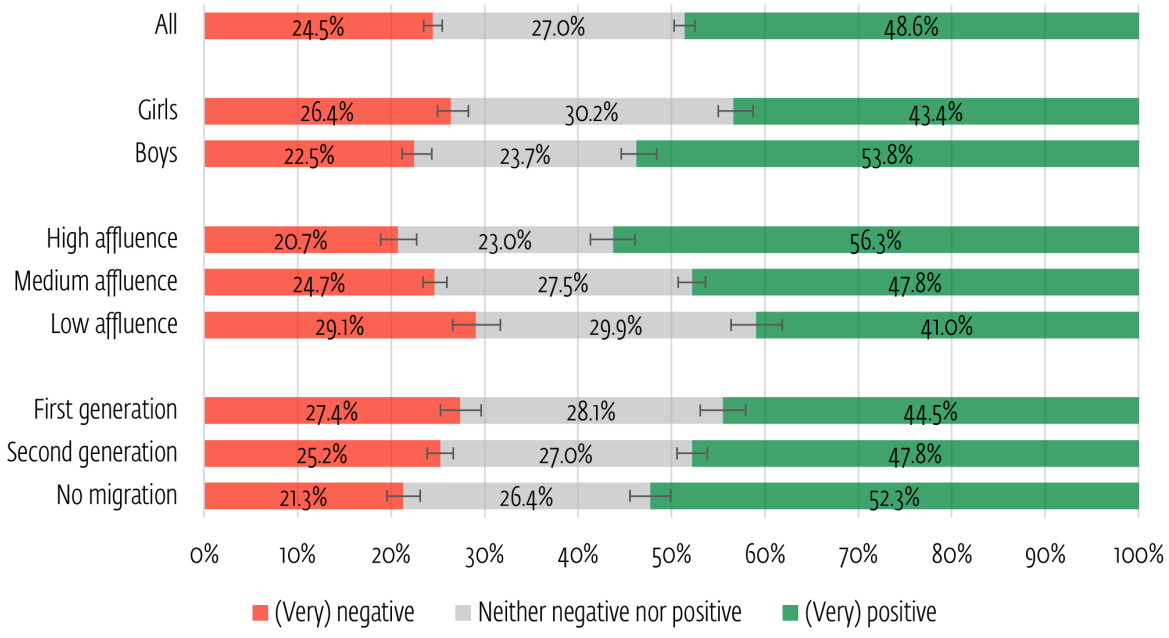
Physical activity

The impact of the COVID-19 pandemic on adolescent's physical activity

Physical activity is the area with the least respondents reporting a neutral impact of the COVID-19 pandemic. Almost three quarters of the respondents perceived either a (very) positive or a (very) negative an impact of the pandemic on physical activity (Figure 20). It is the area with the third highest proportion of respondents reporting a positive or very positive impact of the pandemic (48.6%), as well as the area with the third highest proportion of respondents reporting a negative or very negative impact (24.5%).

As shown in Figure 20, boys reported (very) positive impacts of the pandemic on physical activity in higher proportions than girls (53.8% vs. 43.4%). The pandemic had a (very) negative impact in 22.5% of boys and in 26.4% of girls. Age differences involved three age groups: 11-12-, 13-14-, and 15–16-year-old adolescents (see the appendix Figure 39 and Table 11). The older the respondent, the more likely they were to report a (very) negative impact and the less likely they were to report (very) positive impacts of the pandemic.

Figure 20: COVID-19 pandemic impact on adolescents' physical activity



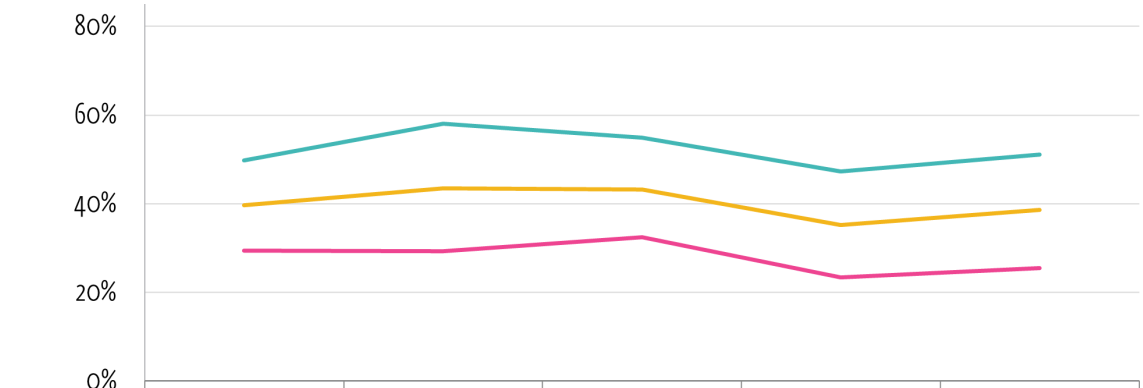
The relationship between family affluence and the perception of the pandemic's impact on physical activity was quite linear: the higher the family affluence, the higher the percentage of adolescents reporting a (very) positive impact and the lower the percentage of adolescents reporting a (very) negative impact (Figure 20). Family structure involved differences between adolescents living with both parents and those living with a single parent. Here, again, the former involved the highest percentage of (very) positive answers and the lowest percentage of (very) negative answers (see the appendix Figure 39 and Table 11). The relation between perceived impact on physical activity and the type of school reflects its relation to age as well as family affluence (see the appendix Figure 39 and Table 11).

Results also revealed differences relating to the migration background (Figure 20). Adolescents with no migration background were less likely to report a (very) negative impact than first- and second-generation migrants (21.3% vs. 27.4% and 25.2%, respectively). Adolescents with no migration background were also more likely to report a (very) positive impact than first- and second-generation migrants (52.3% vs. 44.5% and 47.8%, respectively).

Trends in vigorous physical activity (VPA)

In all HBSC waves, adolescents were asked to indicate how often they exercised in their free time so much that they sweated or got out of breath. This item involved a 1-7 rating scale until 2018 and a 1-8 rating scale in 2022. In both cases, the scale ranged from "every day" to "never". The 2022 version split one of the response options (i.e. "2-3 times a week") into two distinct response options (i.e. "3 times a week" and "twice a week"). The figure below presents the rates of adolescents who exercised at least four times per week. These proportions were not affected by the abovementioned revision of the rating scale.

Figure 21: Trends in vigorous physical activity (VPA) practiced at least four times per week



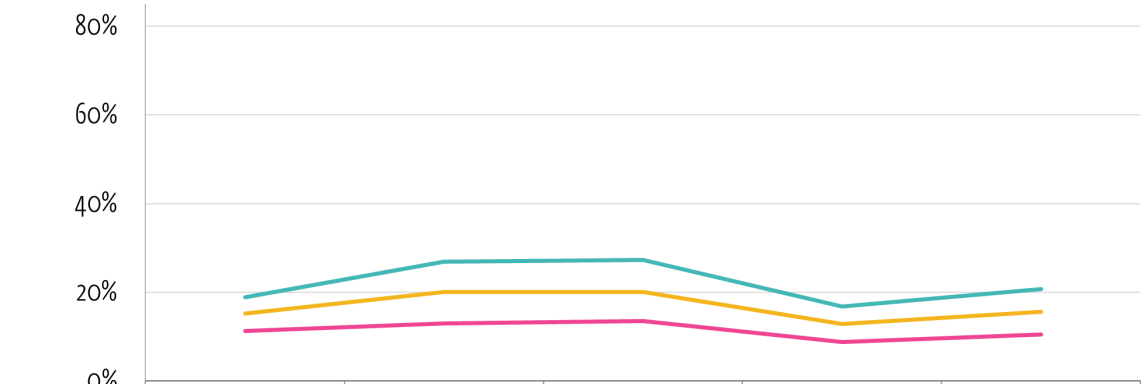
	2006	2010	2014	2018	2022
Overall	40%	43%	43%	35%	39%
Boys	50%	58%	55%	47%	51%
Girls	29%	29%	32%	23%	26%

As shown in Figure 21, the prevalence of adolescents practicing VPA at least four times a week has consistently been higher in boys than in girls since 2006. The level of VPA fluctuated since 2006, but is at a similar level in 2022 than it was in 2006. After peaks in 2010 (boys) and 2014 (girls), an increase was observed between 2018 and 2022 in both boys and girls. This increase was similar to previous fluctuations in the prevalence of VPA.

Trends in moderate-to-vigorous physical activity (MVPA)

Adolescents were also asked to report on how many days they were physically active for a total of at least 60 minutes per day over the past week. For this question and in contrast to VPA, adolescents were asked to take into consideration moderate forms of physical activity such as walking without being out of breath. This item relied on a 0-7 rating scale ranging from "0 day" to "7 days". Figure 22 displays the percentage of adolescents reporting to practice MVPA every day.

Figure 22: Trends in the daily practice moderate-to-vigorous physical activity (MVPA)



	2006	2010	2014	2018	2022
Overall	15%	20%	20%	13%	16%
Boys	19%	27%	27%	17%	21%
Girls	11%	13%	14%	9%	10%

Results in MVPA follow a similar pattern than the one described above for VPA. While the prevalence of the 2006 and 2022 are quite similar, the rates of MVPA fluctuated during this period with an increase for both boys and girls from 2018 to 2022 (Figure 22). As VPA, MVPA was found to vary with gender: the prevalence of MVPA has been consistently higher in boys since 2006.

With the previous fluctuations in the trends being similar in magnitude to those observed between 2018 and 2022, it cannot be determined whether the increases of levels of VPA and MVPA between 2018 and 2022 were specifically linked to the COVID-19 pandemic or constitute one of the reoccurring fluctuations.

Dietary intake and eating habits

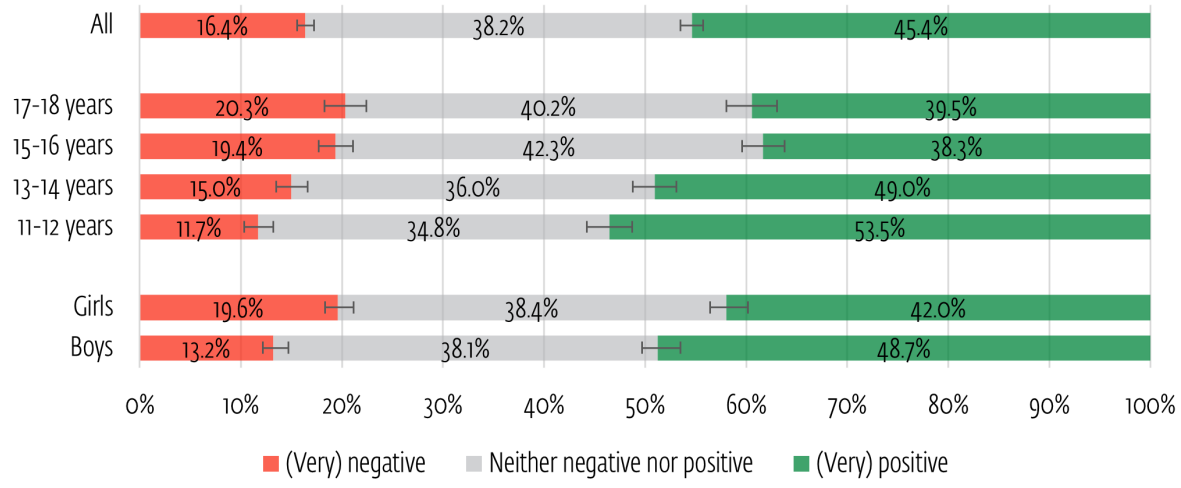
The impact of the COVID-19 pandemic on what adolescents ate or drank

Dietary intake was operationalized as "what you ate and drank" in the COVID-19 perceived impact scale. While 16.4% of respondents perceived a negative or very negative impact of the COVID-19 pandemic on their dietary intake, 45.4% reported positive or very positive impacts (Figure 23).

Girls reported a (very) negative impact of the pandemic on their dietary intake in higher proportions than boys (19.6% vs. 13.2%; see Figure 23). Moreover, the percentage of girls having selected one of the two positive response options was lower than the corresponding percentage of boys (42% vs. 48.7%). The age involved differences between three age categories: 11-12-, 13-14-, and 15-16-year-old adolescents (Figure 23). The older a respondent was, the likelier they were to have a (very) negative impact and the less likely they were to have (very) positive perceptions of the impact of the pandemic on their dietary intake. This pattern was reflected in the results pertaining to the type of school (see the appendix Figure 40 and Table 12).

The perceived positive impact of the pandemic on dietary intake was also related to migration background. Participants with no migration background were less likely to report a (very) positive impact than their counterparts (see the appendix Figure 40 and Table 12). Family affluence and family structure were uninfluential for the perceived impact of the pandemic in this area of life.

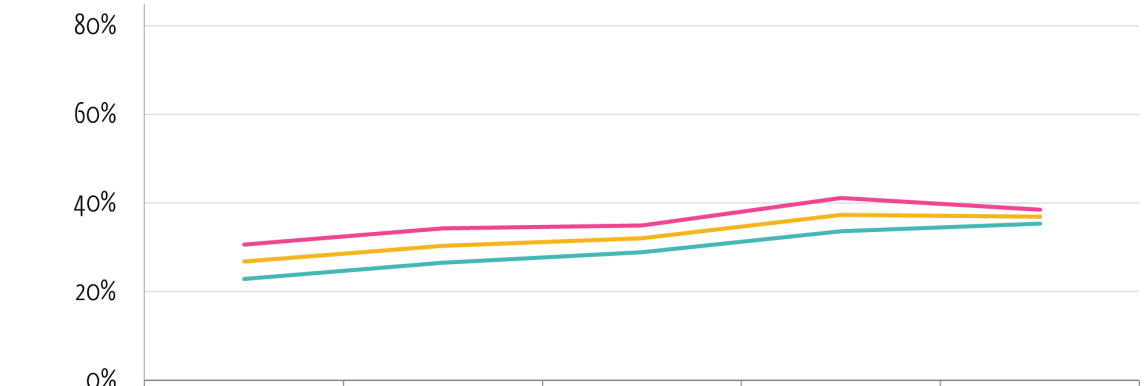
Figure 23: COVID-19 pandemic impact on what adolescents' ate or drank



Trends in dietary intake

To assess their dietary intake and to monitor trends over time, adolescents were asked several questions in the HBSC Luxembourg waves between 2006 and 2022. Adolescents' dietary intake was captured by asking adolescents to indicate how often they consumed vegetables, fruits, sweets and sugary soft drinks on a scale ranging from 1 for "never" to 7 for "more than once daily". Figure 24 reports the prevalence of adolescents eating vegetables at least daily.

Figure 24: Trends in daily vegetable consumption

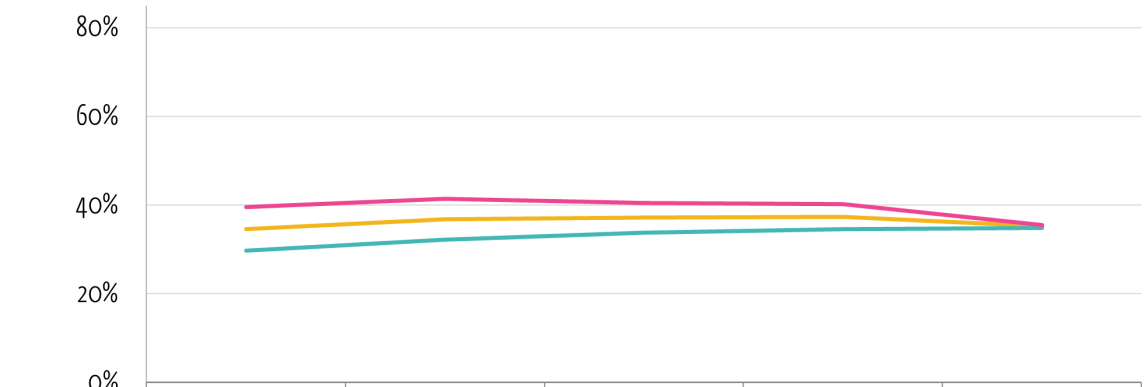


	2006	2010	2014	2018	2022
Overall	27%	30%	32%	37%	37%
Boys	23%	27%	29%	34%	35%
Girls	31%	34%	35%	41%	39%

The percentage of adolescents eating vegetables on a daily basis has increased from 2006 to 2018 and has been stable since. The increase in daily vegetable consumption was more prominent and consistent for boys than for girls. In girls, the prevalence in question even slightly decreased between 2018 and 2022 (Figure 24). The gender gap in daily vegetable consumption has thus decreased over time, with a particularly small gender gap in 2022.

The overall daily consumption of fruits has been quite stable over time (Figure 25). However, this stability for both genders combined masks gender differences in the trends: in boys, the daily fruit consumption has regularly, albeit slowly, increased from 30% in 2006 to 35% in 2018 and 2022; in girls, it was stable until 2018 and then decreased from 40% to 35% in 2022. Similarly to the trends for daily vegetable consumption, the gender gap in daily fruit consumption has decreased and no gender gap was existent in 2022.

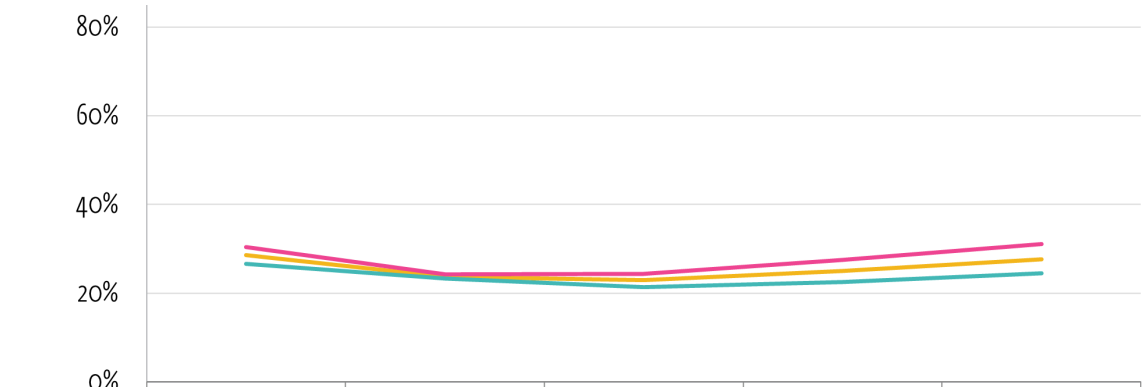
Figure 25: Trends in daily fruit consumption



	2006	2010	2014	2018	2022
Overall	35%	37%	37%	37%	35%
Boys	30%	32%	34%	35%	35%
Girls	40%	41%	40%	40%	35%

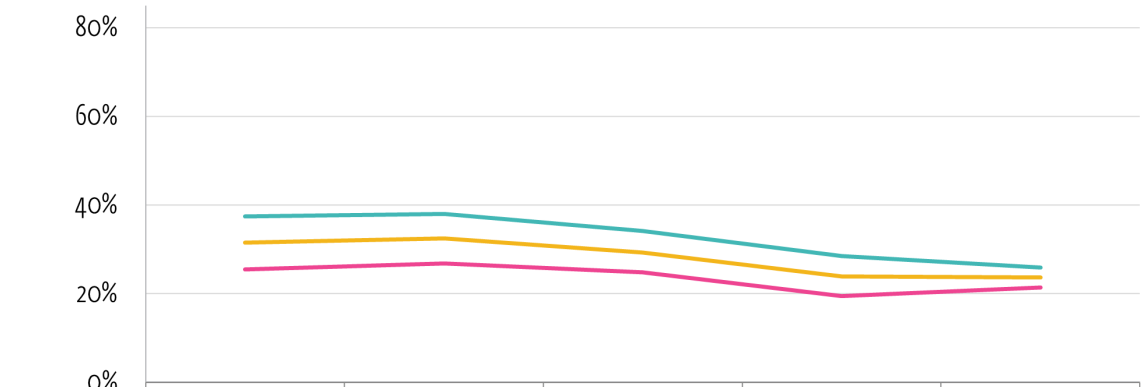
Overall, Figure 26 shows that the consumption of sweets has fluctuated since 2006 with a negative peak in 2014. However, the corresponding prevalence in 2006 and 2022 are similar. While daily consumption of sweets has consistently been higher in girls than in boys, the gender gap has increased over the years and doubled between 2006 and 2018.

Figure 26: Trends in daily sweet consumption



	2006	2010	2014	2018	2022
Overall	29%	24%	23%	25%	28%
Boys	27%	23%	21%	22%	24%
Girls	30%	24%	24%	28%	31%

Figure 27: Trends in daily soft drink consumption



	2006	2010	2014	2018	2022
Overall	32%	32%	29%	24%	24%
Boys	37%	38%	34%	28%	26%
Girls	25%	27%	25%	19%	21%

Relatively stable between 2006 and 2010, the overall daily consumption of sugary soft drinks has decreased ever since (Figure 27). However, while boys' daily soft drink consumption continued to decrease in 2022, girls' consumption has slightly increased between 2018 and 2022. Similarly to the trends for daily vegetable and fruit consumption, the gender gap in daily soft drink consumption has decreased over time, with a particularly small gender gap in 2022.

In sum, for daily consumption of vegetables, fruits and sugary drinks, girl's dietary intake improved between 2006 and 2018. During this time, daily vegetable and fruit consumption increased or was stable for girls, while daily consumption of soft drinks decreased. Between 2018 and 2022, these aspects of dietary consumption deteriorated for the first time since 2006 for girls. During this time, daily vegetable and fruit consumption decreased for girls while daily consumption of soft drinks increased. The gender gap in favour of girls for these dietary intake indicators has slowly been decreasing or remained stable since 2006, but with the reversal of the trend direction for girls and the continued positive trends for boys between 2018 and 2022, the gap has decreased particularly quickly during this period.

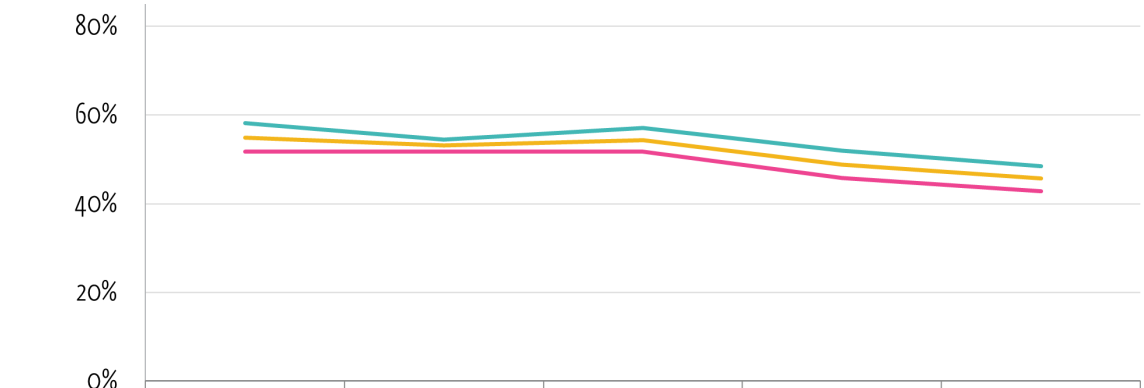
With regards to the impact of the COVID-19 pandemic on the trends in adolescents' dietary intake, there is an indication of new evolutions between 2018 and 2022 that are not comparable to the fluctuations in the past. Therefore, an impact of the pandemic on the dietary intake on girls and subsequently on the gender gap might be present.

Trends in breakfast (weekdays) consumption (eating habits)

Adolescents eating habits were captured by asking adolescents about the number of times they usually have breakfast during the week and, more specifically, on weekdays. Participants were asked to indicate "how often [they] usually [had] breakfast (i.e., more than a glass of milk or fruit juice)". This item relied on a 1-6 rating scale ranging from

"I never have breakfast during the weekdays" to "five days". Figure 28 displays the percentage of adolescents having breakfast every weekday.

Figure 28: Trends in daily breakfast (weekdays) consumption



	2006	2010	2014	2018	2022
Overall	55%	53%	54%	49%	46%
Boys	58%	55%	57%	52%	49%
Girls	52%	52%	52%	46%	43%

Results show that the prevalence of adolescents having breakfast every weekday has decreased over time, despite a stabilisation between 2010 and 2014. The decrease in question is similar in boys and in girls and the gender gap is rather constant. However, having breakfast every weekday is more common in boys than in girls. There is no indication of specific trends between 2018 and 2022 and, consequently, for an impact of the pandemic on adolescents' eating habits.

Conclusions and perspectives

The COVID-19 pandemic and its preventive related measures have disrupted the lives of young people all around the globe. A WHO report including 22 countries indicated important disparities in the perception of the impact of the COVID-19 pandemic (Residori et al., 2023). Girls, older adolescents and those from low affluent families perceived a negative impact of the COVID-19 pandemic more often than their respective peers.

The present report aims to better understand the impact the COVID-19 pandemic had on adolescents' life in Luxembourg with a double goal. The first goal is to describe the perception adolescents themselves had of the impact of the COVID-19 pandemic. The second aim of this report is to observe how adolescents' health and health behaviour have evolved before and through the pandemic.

The results presented in this report are based on the perception of adolescents aged from 11 to 18 years old in the year 2022 on the following areas of life: life as a whole, future expectations, family financial situation, health, relationships with family, relationships with friends, mental health, school performance, physical activity and what they ate and drank. The trends presented were extracted from the HBSC Luxembourg website (hbsc.lu), based on the descriptive and independent results of the HBSC Luxembourg study waves of 2006, 2010, 2014, 2018 and 2022.

Firstly, adolescents perceived a (very) positive impact of the COVID-19 pandemic more frequently than a (very) negative impact. There are few changes in the trends that are specific to the period between 2018 and 2022 and that could, as a result, be attributed to the pandemic. In comparison to the mean of the 22 countries under scrutiny in a recent WHO report, adolescents in Luxembourg perceived positive impacts of the COVID-19 pandemic more often than adolescents in half of all other 22 countries (Residori et al., 2023). Although these results might be an indication of the resilience capacity of adolescents in Luxembourg and the resources available to them while facing such a challenging circumstance, close to 10% of adolescents reported (very) negative impacts of the pandemic in six or more areas of life and faced, therefore, a sustained and pronounced negative impact of the pandemic.

In addition, significant disparities were found, showing that the overall results mask important inequalities and that the negative consequences of the COVID-19 pandemic struck the more vulnerable groups more often. For the majority of areas of life, girls and older adolescents reported (very) negative impacts of the pandemic more often than their counterparts. In international comparison, some of the highest gender differences across the 22 countries have been observed in Luxembourg (Cosma et al., 2023). Disparities were also consistently observed for adolescents from families from low affluence, who were, for example, roughly three times as likely to report (very) negative consequences of the COVID-19 pandemic on their family's financial situation than adolescents from families of high affluence. For that reason, there are indications of the COVID-19 pandemic having widened the gaps between vulnerable and privileged groups even further. Because of these differences, the health and well-being of vulnerable groups have to continue to be monitored, given the pandemic might impact them for longer than other groups. With vulnerable groups more likely to report negative impact of the pandemic and potentially suffering more long term consequences, it is possible that the effort and advances made in recent years to reduce these inequalities are nullified.

Secondly, the results point to the relative success of the less strict prevention measures in Luxembourg. In comparison to other countries, Luxembourg had fewer school closures (World Health Organization, 2023) and a higher number

of days of school closures during the pandemic were associated with a higher school pressure (Elgar et al., 2023). In international comparison of the overall results, adolescents in Luxembourg fared better than the mean of adolescents in 22 countries, but showed larger differences according to gender and family affluence than the mean of adolescents (Cosma et al., 2023; Residori et al., 2023).

When comparing the present results with the 2021 YAC study (Residori et al., 2021), it was observed, that the proportion of adolescents who perceived a (very) negative impact stayed mostly stable, while the proportion reporting a (very) positive impact has increased very markedly and often even doubled since 2021. This might indicate that that positive effects are beginning to become more apparent over time and that strong effects of the pandemic are remembered longer, while subtle or neutral experiences might begin to fade in memory and are reconsidered as positive in retrospective. Unfortunately, the proportion of adolescents reporting (very) negative impacts have not decreased, which could point towards the longevity of the negative effects experienced by vulnerable groups during the pandemic and their long-term consequences (Narayan et al., 2022).

The negative perceived impact of COVID-19 on mental health was the highest among all the examined areas and this observation is mostly driven by the negative impacts on girls. This is the only domain where the negative perception was more prevalent than the positive one, but only for girls. Almost twice as many girls reported a (very) negative impact of the COVID-19 in their mental health, in comparison to boys. In addition, low life satisfaction and multiple health complaints show a particularly steep increase for girls between 2018 and 2022. The gender gap in life satisfaction and multiple health complaints, relatively stable since 2006 and always in favour of boys, increased and reached its peak in 2022.

Mental health preservation measures should thus be implemented, especially for girls. The Mental health and well-being of school-aged children in Luxembourg report further explores adolescents' mental health situation in the country (Catunda, Mendes, Lopes Ferreira, & Residori, 2023). The report provides comprehensive information about key mental health and well-being indicators, such as life satisfaction, psychosomatic health complaints, loneliness, among others. In addition, it further explores the gender differences in life satisfaction and highlights that addressing adolescent mental health with tailored interventions should be a priority in Luxembourg.

In conclusion, it is important to highlight that the majority of adolescents were able to use their resilience and their resources to prevent short and mid-term negative effects linked to the pandemic. There is however a substantial group of adolescents who experienced a negative impact and vulnerable adolescents are over-represented in this group. This group needs to be supported, especially to prevent long-term consequences linked to the pandemic.

Appendix

Negative overall impact of COVID-19 pandemic

Figure 29: Prevalence of negative overall impact of COVID-19 according to the number of life areas pandemic

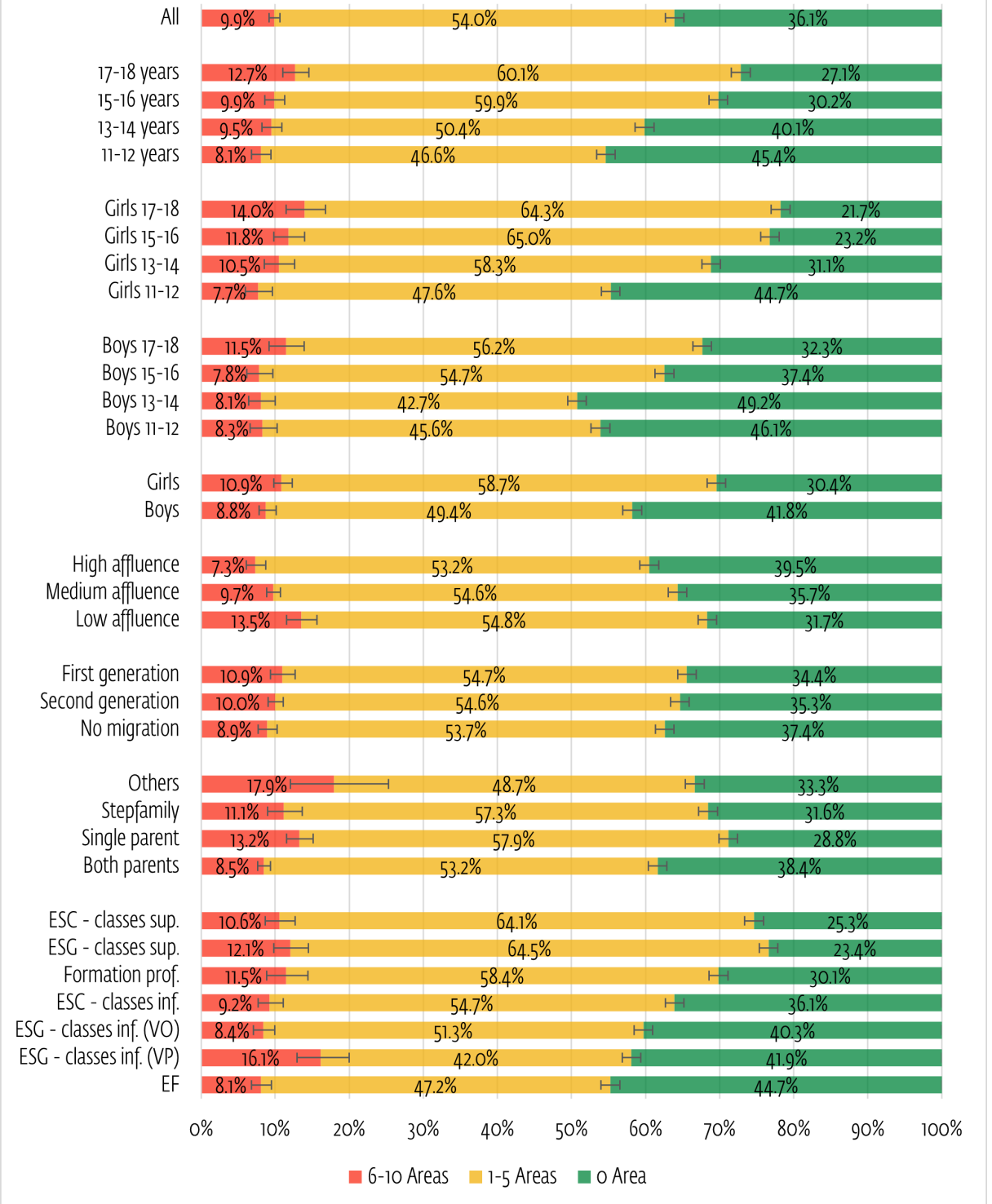


Table 1: Prevalence of negative overall impact of the COVID-19 pandemic according to the number of life areas

	6-10 Areas	1-5 Areas	0 Area	Chi square test
All				**N = 6 715**
	9.9 (9.2-10.6)	54.0 (52.8-55.2)	36.1 (34.9-37.2)	
Age				**N = 6 715**
11-12	8.1 (6.8-9.4)	46.6 (44.2-49.0)	45.4 (43.0-47.7)	
13-14	9.5 (8.2-10.9)	50.4 (48.1-52.7)	40.1 (37.8-42.4)	*p* = <.001
15-16	9.9 (8.6-11.3)	59.9 (57.7-62.1)	30.2 (28.1-32.2)	γ = -.193
17-18	12.7 (11.0-14.6)	60.1 (57.5-62.7)	27.1 (24.8-29.5)	
Age x Gender				**N = 3 276**
Girls 11-12	7.7 (6.0-9.6)	47.6 (44.2-51.0)	44.7 (41.3-48.1)	
Girls 13-14	10.5 (8.5-12.6)	58.3 (55.0-61.6)	31.1 (28.1-34.2)	*p* = <.001
Girls 15-16	11.8 (9.8-14.0)	65.0 (61.9-68.0)	23.2 (20.6-26.0)	γ = .245
Girls 17-18	14.0 (11.5-16.8)	64.3 (60.6-67.9)	21.7 (18.7-25.0)	
				N = 3 396
Boys 11-12	8.3 (6.6-10.3)	45.6 (42.4-49.0)	46.1 (42.9-49.4)	
Boys 13-14	8.1 (6.4-10.0)	42.7 (39.4-45.9)	49.2 (45.9-52.4)	*p* = <.001
Boys 15-16	7.8 (6.2-9.7)	54.7 (51.5-58.0)	37.4 (34.3-40.6)	γ = .148
Boys 17-18	11.5 (9.2-13.9)	56.2 (52.6-59.9)	32.3 (28.9-35.9)	
Gender				**N = 6 672**
Girls	10.9 (9.8-12.0)	58.7 (57.0-60.4)	30.4 (28.9-32.0)	*p* = <.001
Boys	8.8 (7.8-9.7)	49.4 (47.8-51.1)	41.8 (40.1-43.4)	Cramér's V. = .119
Family affluence				**N = 6 587**
High	7.3 (6.1-8.7)	53.2 (50.7-55.7)	39.5 (37.1-42.0)	*p* = <.001
Medium	9.7 (8.8-10.7)	54.6 (53.0-56.2)	35.7 (34.2-37.2)	γ = -.109
Low	13.5 (11.6-15.6)	54.8 (51.8-57.8)	31.7 (29.0-34.5)	
Migration background				**N = 6 546**
First generation	10.9 (9.4-12.7)	54.7 (52.0-57.3)	34.4 (31.9-37.0)	*p* = .212
Second generation	10.0 (9.0-11.1)	54.6 (52.9-56.3)	35.3 (33.7-37.0)	Cramér's V. = .021
No migration	8.9 (7.7-10.3)	53.7 (51.4-55.9)	37.4 (35.2-39.6)	
Family structure				**N = 6 437**
Others	17.9 (12.1-25.3)	48.7 (39.9-57.0)	33.3 (25.8-42.1)	
Stepfamily	11.1 (9.0-13.7)	57.3 (53.7-61.0)	31.6 (28.3-35.1)	*p* = <.001
Single parents	13.2 (11.5-15.2)	57.9 (55.3-60.6)	28.8 (26.5-31.3)	Cramér's V. = .073
Both parents	8.5 (7.7-9.3)	53.2 (51.7-54.7)	38.4 (36.9-39.8)	
Type of school				**N = 6 715**
ESC-*classes sup.*	10.6 (8.7-12.7)	64.1 (60.9-67.2)	25.3 (22.5-28.2)	
ESG-*classes sup.*	12.1 (9.9-14.5)	64.5 (61.0-67.8)	23.4 (20.5-26.5)	
Formation prof.	11.5 (8.8-14.4)	58.4 (54.0-62.7)	30.1 (26.3-34.3)	*p* = <.001
ESC-*classes inf.*	9.2 (7.7-11.1)	54.7 (51.7-57.5)	36.1 (33.3-38.9)	Cramér's V. = .123
ESG-*classes inf.* (VO)	8.4 (7.1-9.9)	51.3 (48.7-53.9)	40.3 (37.8-42.8)	
ESG-*classes inf.* (VP)	16.1 (13-20.0)	42.0 (37.3-46.6)	41.9 (37.3-46.6)	
EF	8.1 (6.8-9.5)	47.2 (44.7-49.7)	44.7 (42.3-47.2)	

Respondents were asked 10 items related to the perceived impact of the COVID-19 pandemic. The items included the areas: life as a whole, health, relationship with family, relationship with friends, mental health, school performance, physical activity, food intake, family financial situation and future expectations. Answers categories varied from "very negative" (scored as 1) to "very positive" (scored as 5). The category "0 Areas" refers to adolescents who did not report any area as "very negative" or "negative". The category "1-5 Areas" refers to adolescents that perceived 1 to 5 areas with "very negative" and "negative" COVID-19 impact. The respondents who selected 1-to-5 "very negative" or "negative" response options and who did not answer at least one item of the scale were excluded. Respondents having selected at least six "very negative" or "negative" response options were included, irrespective of their corresponding number of missing values. The results are in % (95% Confidence Interval).

Positive overall impact of the COVID-19 pandemic

Figure 30: Prevalence of positive overall impact of the COVID-19 pandemic according to the number of life areas

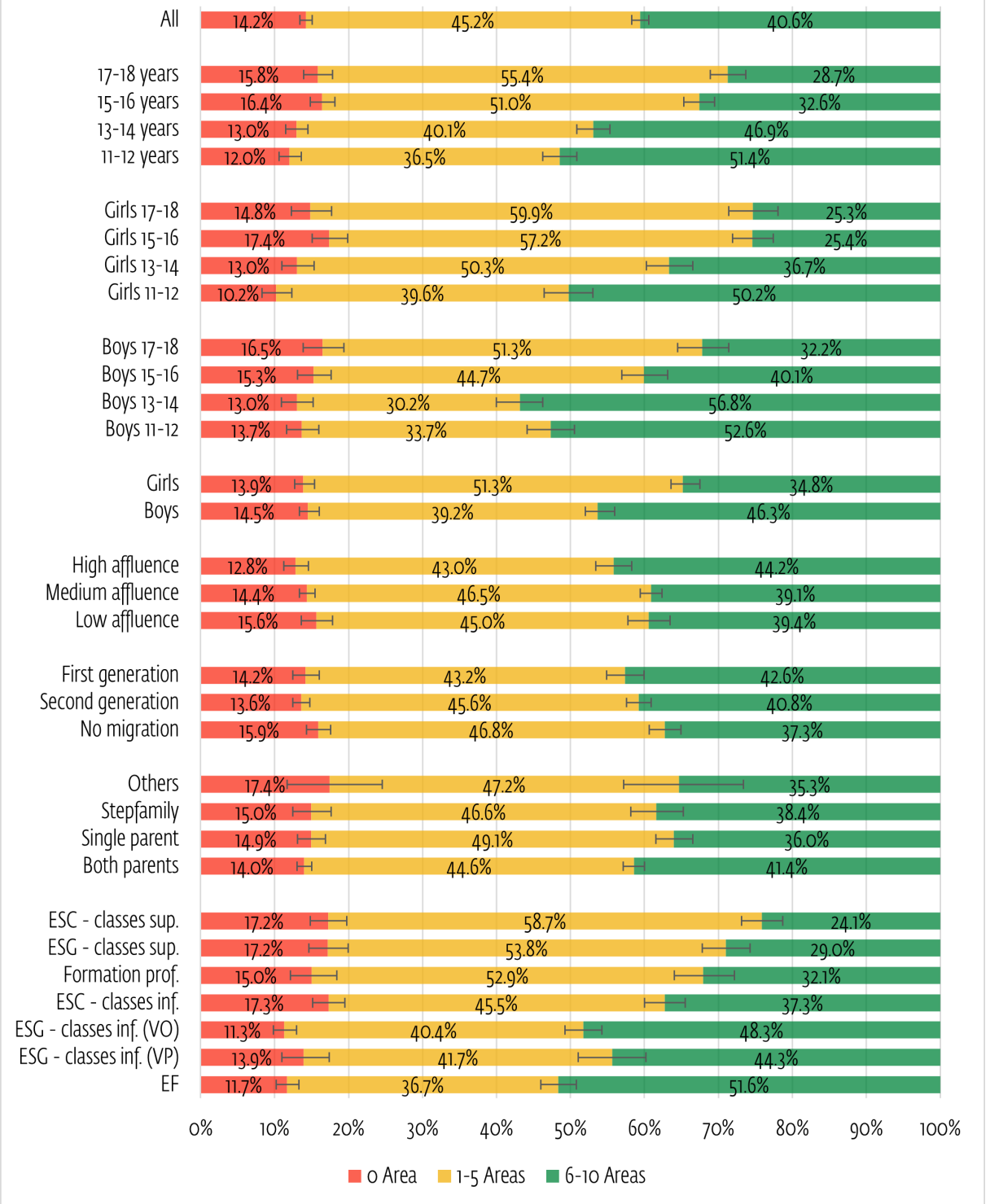


Table 2: Prevalence of positive overall impact of the COVID-19 pandemic according to the number of life areas

	0 Area	1-5 Areas	6-10 Areas	Chi square test
All				**N = 7 000**
	14.2 (13.4-15.1)	45.2 (44.0-46.3)	40.6 (39.4-41.7)	
Age				**N = 7 000**
11-12	12.0 (10.6-13.6)	36.5 (34.3-38.8)	51.4 (49.2-53.8)	
13-14	13.0 (11.5-14.5)	40.1 (37.9-42.3)	46.9 (44.7-49.2)	*p* = <.001
15-16	16.4 (14.8-18.1)	51.0 (48.8-53.2)	32.6 (30.5-34.7)	γ = -.213
17-18	15.8 (13.9-17.8)	55.4 (52.8-58.0)	28.7 (26.4-31.2)	
Age x Gender				**N = 3 394**
Girls 11-12	10.2 (8.3-12.3)	39.6 (36.3-42.8)	50.2 (46.9-53.5)	
Girls 13-14	13.0 (11.0-15.4)	50.3 (47.0-53.5)	36.7 (33.6-39.9)	*p* = <.001
Girls 15-16	17.4 (15.1-19.9)	57.2 (54.1-60.3)	25.4 (22.7-28.2)	γ = -.243
Girls 17-18	14.8 (12.3-17.7)	59.9 (56.1-63.5)	25.3 (22.1-28.7)	
				N = 3 561
Boys 11-12	13.7 (11.6-16.0)	33.7 (30.7-36.8)	52.6 (49.4-55.8)	
Boys 13-14	13.0 (10.9-15.2)	30.2 (27.3-33.1)	56.8 (53.6-59.9)	*p* = <.001
Boys 15-16	15.3 (13.1-17.6)	44.7 (41.6-47.9)	40.1 (37.1-43.3)	γ = -.186
Boys 17-18	16.5 (13.9-19.4)	51.3 (47.6-55.0)	32.2 (28.9-35.8)	
Gender				**N = 6 955**
Girls	13.9 (12.7-15.1)	51.3 (49.6-53.0)	34.8 (33.2-36.4)	*p* = <.001
Boys	14.5 (13.4-15.7)	39.2 (37.6-40.8)	46.3 (44.7-48.0)	Cramér's V. = .128
Family affluence				**N = 6 853**
High	12.8 (11.3-14.5)	43.0 (40.6-45.5)	44.2 (41.8-46.6)	*p* = .002
Medium	14.4 (13.3-15.5)	46.5 (45.0-48.0)	39.1 (37.6-40.6)	γ = .060
Low	15.6 (13.6-17.9)	45.0 (42.0-47.8)	39.4 (36.6-42.3)	
Migration background				**N = 6 813**
First generation	14.2 (12.5-16.1)	43.2 (40.7-45.8)	42.6 (40.1-45.2)	*p* = .008
Second generation	13.6 (12.5-14.8)	45.6 (44.0-47.3)	40.8 (39.1-42.4)	Cramér's V. = .032
No migration	15.9 (14.3-17.6)	46.8 (44.6-49.1)	37.3 (35.2-39.5)	
Family structure				**N = 6 692**
Others	17.4 (11.7-24.6)	47.2 (38.6-55.5)	35.3 (27.8-44.0)	
Stepfamily	15.0 (12.4-17.6)	46.6 (43.0-50.3)	38.4 (34.9-42.0)	*p* = .016
Single parents	14.9 (13.1-16.9)	49.1 (46.4-51.7)	36.0 (33.6-38.6)	Cramér's V. = .034
Both parents	14.0 (13.0-15.0)	44.6 (43.1-46.0)	41.4 (40.0-42.9)	
Type of school				**N = 7 000**
ESC-*classes sup.*	17.2 (14.8-19.7)	58.7 (55.4-61.8)	24.1 (21.4-26.9)	
ESG-*classes sup.*	17.2 (14.6-20.0)	53.8 (50.3-57.3)	29.0 (25.9-32.3)	
Formation prof.	15.0 (12.2-18.4)	52.9 (48.6-57.3)	32.1 (28.2-36.3)	
ESC-*classes inf.*	17.3 (15.2-19.5)	45.5 (42.7-48.4)	37.3 (34.5-40.0)	*p* = <.001
ESG-*classes inf.* (VO)	11.3 (9.8-13.0)	40.4 (38.0-42.9)	48.3 (45.8-50.8)	Cramér's V. = .146
ESG-*classes inf.* (VP)	13.9 (11.0-17.4)	41.7 (37.3-46.4)	44.3 (39.7-48.9)	
EF	11.7 (10.2-13.3)	36.7 (34.4-39.0)	51.6 (49.2-54.0)	

Respondents were asked 10 items related to the perceived impact of the COVID-19 pandemic. The items included the areas: life as a whole, health, relationship with family, relationship with friends, mental health, school performance, physical activity, food intake, family financial situation and future expectations. Answers categories varied from "very negative" (scored as 1) to "very positive" (scored as 5). The category "0 Areas" refers to adolescents who did not report any area as "very positive" or "positive". The category "1-5 Areas" refers to adolescents that perceived 1 to 5 areas with "very positive" and "positive" COVID-19 impact. The respondents who selected 1-to-5 "very positive" or "positive" response options and who did not answer at least one item of the scale were excluded. Respondents having selected at least six "very positive" or "positive" response options were included, irrespective of their corresponding number of missing values. The results are in % (95% Confidence Interval).

The impact of the COVID-19 pandemic on adolescents' life as a whole

Figure 31: Prevalence of the impact of the COVID-19 pandemic on adolescents' life as a whole according to sociodemographic groups

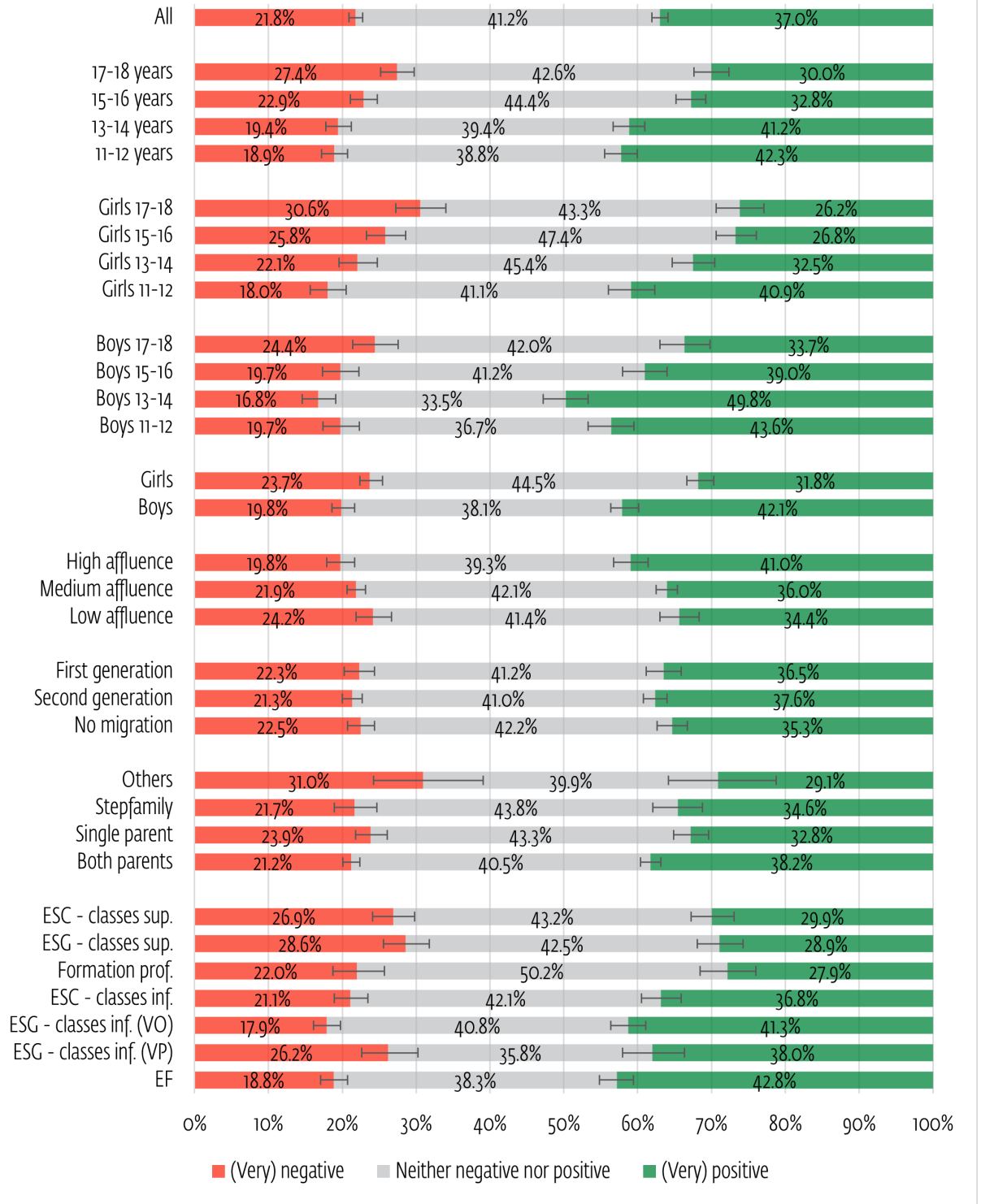


Table 3: Prevalence of the impact of COVID-19 pandemic on adolescents' life as a whole according to sociodemographic groups

	(Very) negative (1-2)	Neither negative nor positive (3)	(Very) positive (4-5)	Chi square test
All				**N = 7 478**
	21.8 (20.9-22.8)	41.2 (40.1-42.4)	37.0 (35.9-38.1)	
Age				**N = 7 478**
11-12	18.9 (17.2-20.7)	38.8 (36.7-41.0)	42.3 (40.1-44.5)	
13-14	19.4 (17.8-21.2)	39.4 (37.3-41.5)	41.2 (39.0-43.3)	*p* = <.001
15-16	22.9 (21.1-24.7)	44.4 (42.2-46.5)	32.8 (30.7-34.8)	γ = -.132
17-18	27.4 (25.2-29.8)	42.6 (40.0-45.1)	30.0 (27.7-32.4)	
Age x Gender				**N = 3 662**
Girls 11-12	18.0 (15.6-20.6)	41.1 (38.0-44.3)	40.9 (37.8-44.1)	
Girls 13-14	22.1 (19.6-24.7)	45.4 (42.4-48.5)	32.5 (29.6-35.5)	*p* = <.001
Girls 15-16	25.8 (23.2-28.6)	47.4 (44.4-50.5)	26.8 (24.2-29.6)	γ = -.168
Girls 17-18	30.6 (27.2-34.0)	43.3 (39.7-47.0)	26.2 (23.0-29.5)	
				N = 3 765
Boys 11-12	19.7 (17.4-22.3)	36.7 (33.7-39.7)	43.6 (40.5-46.7)	
Boys 13-14	16.8 (14.6-19.1)	33.5 (30.7-36.4)	49.8 (46.7-52.8)	*p* = <.001
Boys 15-16	19.7 (17.3-22.2)	41.2 (38.2-44.2)	39.0 (36.0-42.0)	γ = -.100
Boys 17-18	24.4 (21.4-27.6)	42.0 (38.4-45.5)	33.7 (30.4-37.2)	
Gender				**N = 7 427**
Girls	23.7 (22.3-25.1)	44.5 (42.9-46.1)	31.8 (30.3-33.4)	*p* = <.001
Boys	19.8 (18.6-21.1)	38.1 (36.5-39.6)	42.1 (40.5-43.7)	Cramér's V. = .106
Family affluence				**N = 7 286**
High	19.8 (17.9-21.7)	39.3 (37.0-41.6)	41.0 (38.6-43.3)	*p* = <.001
Medium	21.9 (20.7-23.1)	42.1 (40.6-43.6)	36.0 (34.6-37.5)	γ = .073
Low	24.2 (21.9-26.6)	41.4 (38.7-44.2)	34.4 (31.8-37.1)	
Migration background				**N = 7 255**
First generation	22.3 (20.3-24.4)	41.2 (38.8-43.7)	36.5 (34.2-38.9)	*p* = .512
Second generation	21.3 (20.0-22.7)	41.0 (39.4-42.6)	37.6 (36.1-39.2)	Cramér's V. = .015
No migration	22.5 (20.7-24.3)	42.2 (40.1-44.4)	35.3 (33.3-37.4)	
Family structure				**N = 7 119**
Others	31.0 (24.2-39.1)	39.9 (32.5-48.2)	29.1 (22.4-37.0)	
Stepfamily	21.7 (18.9-24.7)	43.8 (40.3-47.3)	34.6 (31.2-37.9)	*p* = <.001
Single parents	23.9 (21.8-26.1)	43.3 (40.9-45.9)	32.8 (30.5-35.2)	Cramér's V. = .042
Both parents	21.2 (20.0-22.4)	40.5 (39.1-42.0)	38.2 (36.8-39.6)	
Type of school				**N = 7 478**
ESC-*classes sup.*	26.9 (24.1-29.8)	43.2 (40.0-46.3)	29.9 (27.1-33.0)	
ESG-*classes sup.*	28.6 (25.6-31.8)	42.5 (39.2-46.0)	28.9 (25.9-32.2)	
Formation prof.	22.0 (18.7-25.7)	50.2 (45.9-54.3)	27.9 (24.2-31.7)	
ESC-*classes inf.*	21.1 (18.9-23.4)	42.1 (39.3-44.8)	36.8 (34.2-39.6)	*p* = <.001
ESG-*classes inf.* (VO)	17.9 (16.1-19.8)	40.8 (38.5-43.2)	41.3 (39.0-43.7)	Cramér's V. = .095
ESG-*classes inf.* (VP)	26.2 (22.6-30.3)	35.8 (31.7-40.0)	38.0 (34.0-42.4)	
EF	18.8 (17.1-20.7)	38.3 (36.1-40.6)	42.8 (40.5-45.1)	

Respondents were asked how they perceived the impact of the COVID-19 pandemic on their life as whole. Answers categories varied from "very negative" (scored as 1) to "very positive" (scored as 5). The perceived impact was categorized in: (very) negative (categories 1 and 2), neither negative nor positive (category 3) and positive (categories 4 and 5). The results are in % (95.0% Confidence Interval).

The impact of the COVID-19 pandemic on adolescents' future expectations

Figure 32: Prevalence of the impact of the COVID-19 pandemic on adolescents' future expectations according to sociodemographic groups

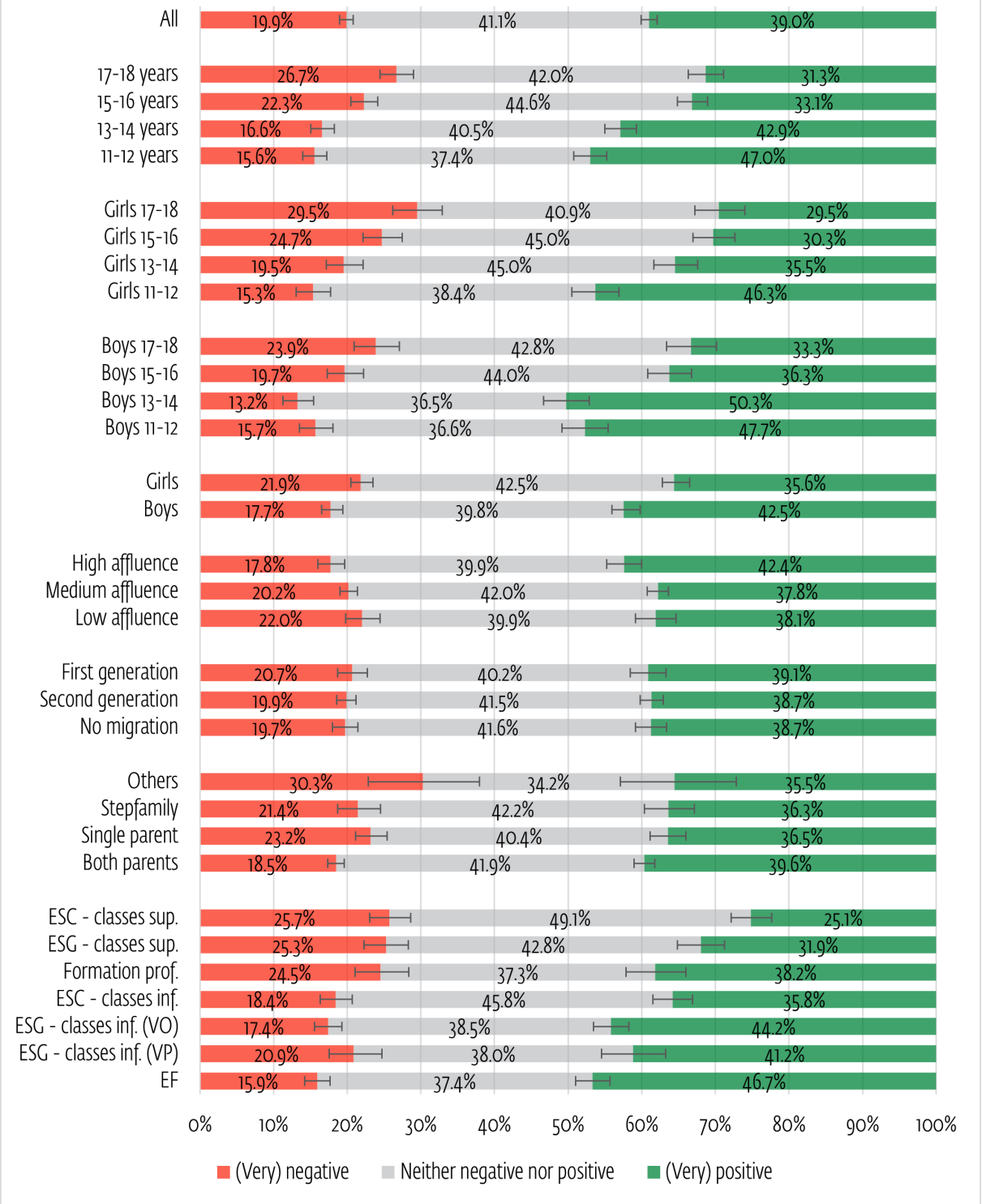


Table 4: Prevalence of the impact of the COVID-19 pandemic on adolescents' future expectations acording to sociodemographic groups

	(Very) negative (1-2)	Neither negative nor positive (3)	(Very) positive (4-5)	Chi square test
All				**N = 7 382**
	19.9 (19.0-20.8)	41.1 (40.0-42.3)	39.0 (37.9-40.1)	
Age				**N = 7 382**
11-12	15.6 (14.0-17.3)	37.4 (35.3-39.6)	47.0 (44.8-49.3)	
13-14	16.6 (15.0-18.3)	40.5 (38.4-42.7)	42.9 (40.7-45.0)	*p* = <.001
15-16	22.3 (20.5-24.1)	44.6 (42.4-46.8)	33.1 (31.1-35.2)	γ = -.177
17-18	26.7 (24.5-29.0)	42.0 (39.4-44.5)	31.3 (28.9-33.7)	
Age x Gender				**N = 3 602**
Girls 11-12	15.3 (13.1-17.7)	38.4 (35.3-41.6)	46.3 (43.1-49.5)	
Girls 13-14	19.5 (17.2-22.2)	45.0 (41.9-48.1)	35.5 (32.6-38.6)	*p* = <.001
Girls 15-16	24.7 (22.1-27.5)	45.0 (41.9-48.1)	30.3 (27.5-33.2)	γ = -.189
Girls 17-18	29.5 (26.2-32.9)	40.9 (37.4-44.7)	29.5 (26.3-33.1)	
				N = 3 730
Boys 11-12	15.7 (13.5-18.1)	36.6 (33.6-39.6)	47.7 (44.6-50.9)	
Boys 13-14	13.2 (11.3-15.4)	36.5 (33.6-39.5)	50.3 (47.3-53.4)	*p* = <.001
Boys 15-16	19.7 (17.3-22.2)	44.0 (41.0-47.1)	36.3 (33.4-39.3)	γ = -.165
Boys 17-18	23.9 (21.0-27.1)	42.8 (39.3-46.4)	33.3 (30.1-36.8)	
Gender				**N = 7 332**
Girls	21.9 (20.5-23.2)	42.5 (40.9-44.1)	35.6 (34.1-37.2)	*p* = <.001
Boys	17.7 (16.5-19.0)	39.8 (38.2-41.4)	42.5 (40.9-44.1)	Cramér's V. = .075
Family affluence				**N = 7 199**
High	17.8 (16.0-19.7)	39.9 (37.5-42.2)	42.4 (40.0-44.8)	*p* = <.001
Medium	20.2 (19.0-21.4)	42.0 (40.5-43.5)	37.8 (36.4-39.3)	γ = .058
Low	22.0 (19.8-24.4)	39.9 (37.1-42.6)	38.1 (35.4-40.9)	
Migration background				**N = 7 170**
First generation	20.7 (18.7-22.7)	40.2 (37.8-42.7)	39.1 (36.7-41.6)	*p* = .907
Second generation	19.9 (18.6-21.2)	41.5 (39.9-43.1)	38.7 (37.1-40.3)	Cramér's V. = .008
No migration	19.7 (18.0-21.4)	41.6 (39.4-43.7)	38.7 (36.7-40.9)	
Family structure				**N = 7 040**
Others	30.3 (22.9-37.9)	34.2 (26.8-42.4)	35.5 (28.1-43.9)	
Stepfamily	21.4 (18.7-24.5)	42.2 (38.8-45.7)	36.3 (33.1-39.8)	*p* = <.001
Single parents	23.2 (21.1-25.4)	40.4 (37.9-42.9)	36.5 (34.1-38.9)	Cramér's V. = .045
Both parents	18.5 (17.4-19.6)	41.9 (40.5-43.3)	39.6 (38.2-41)	
Type of school				**N = 7 382**
ESC-*classes sup.*	25.7 (23.0-28.6)	49.1 (45.9-52.3)	25.1 (22.4-28.0)	
ESG-*classes sup.*	25.3 (22.3-28.3)	42.8 (39.4-46.2)	31.9 (28.7-35.2)	
Formation prof.	24.5 (21.1-28.3)	37.3 (33.3-41.5)	38.2 (34.2-42.4)	*p* = <.001
ESC-*classes inf.*	18.4 (16.3-20.7)	45.8 (43.0-48.5)	35.8 (33.2-38.5)	Cramér's V. = .112
ESG-*classes inf.* (VO)	17.4 (15.6-19.3)	38.5 (36.1-40.9)	44.2 (41.7-46.6)	
ESG-*classes inf.* (VP)	20.9 (17.6-24.7)	38.0 (33.7-42.2)	41.2 (36.9-45.5)	
EF	15.9 (14.2-17.7)	37.4 (35.2-39.7)	46.7 (44.4-49.0)	

Respondents were asked how they perceived the impact of the COVID-19 pandemic on their future expectations. Answers categories varied from "very negative" (scored as 1) to "very positive" (scored as 5). The perceived impact was categorized in: (very) negative (categories 1 and 2), neither negative nor positive (category 3) and positive (categories 4 and 5). The results are in % (95% Confidence Interval).

The impact of the COVID-19 pandemic on adolescents' family financial situation

Figure 33: Prevalence of the impact of the COVID-19 pandemic on adolescents' family financial situation by sociodemographic groups

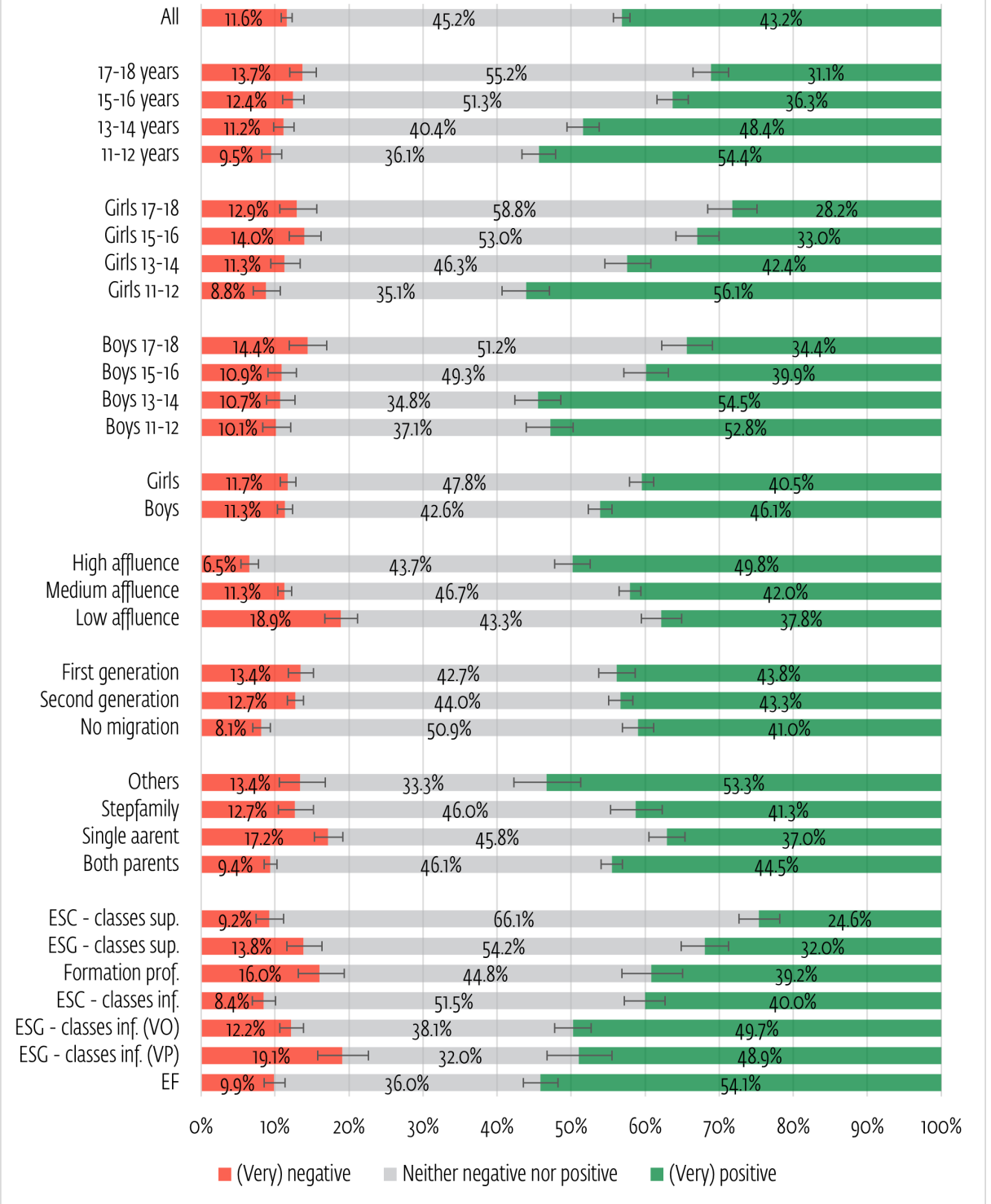


Table 5: Prevalence of the impact of the COVID-19 pandemic on adolescents' family financial situation according to sociodemographic groups

	(Very) negative (1-2)	Neither negative nor positive (3)	(Very) positive (4-5)	Chi square test
All				**N = 7 340**
	11.6 (10.9-12.3)	45.2 (44.1-46.4)	43.2 (42.0-44.3)	
Age				**N = 7 340**
11-12	9.5 (8.2-10.9)	36.1 (34.0-38.3)	54.4 (52.1-56.6)	
13-14	11.2 (9.8-12.6)	40.4 (38.3-42.6)	48.4 (46.2-50.6)	*p* = <.001
15-16	12.4 (11.0-13.9)	51.3 (49.1-53.5)	36.3 (34.2-38.4)	γ = -.217
17-18	13.7 (12.0-15.6)	55.2 (52.6-57.7)	31.1 (28.8-33.5)	
Age x Gender				**N = 3 583**
Girls 11-12	8.8 (7.1-10.7)	35.1 (32.1-38.3)	56.1 (52.8-59.2)	
Girls 13-14	11.3 (9.4-13.4)	46.3 (43.2-49.5)	42.4 (39.4-45.6)	*p* = <.001
Girls 15-16	14.0 (12.0-16.2)	53.0 (49.9-56.1)	33.0 (30.1-35.9)	γ = -.251
Girls 17-18	12.9 (10.7-15.6)	58.8 (55.2-62.5)	28.2 (24.9-31.6)	
				N = 3 707
Boys 11-12	10.1 (8.3-12.1)	37.1 (34.0-40.1)	52.8 (49.6-55.9)	
Boys 13-14	10.7 (8.9-12.7)	34.8 (31.9-37.8)	54.5 (51.3-57.5)	*p* = <.001
Boys 15-16	10.9 (9.0-12.9)	49.3 (46.1-52.3)	39.9 (36.9-42.9)	γ = -.184
Boys 17-18	14.4 (12.0-17.0)	51.2 (47.7-54.9)	34.4 (31.0-37.9)	
Gender				**N = 7 290**
Girls	11.7 (10.7-12.8)	47.8 (46.2-49.4)	40.5 (38.9-42.1)	*p* = <.001
Boys	11.3 (10.3-12.4)	42.6 (41.0-44.2)	46.1 (44.5-47.7)	Cramér's V. = .058
Family affluence				**N = 7 172**
High	6.5 (5.4-7.8)	43.7 (41.3-46.0)	49.8 (47.4-52.2)	*p* = <.001
Medium	11.3 (10.4-12.3)	46.7 (45.2-48.2)	42.0 (40.6-43.5)	γ = .171
Low	18.9 (16.8-21.2)	43.3 (40.5-46.1)	37.8 (35.1-40.5)	
Migration background				**N = 7 140**
First generation	13.4 (11.8-15.2)	42.7 (40.3-45.2)	43.8 (41.4-46.3)	*p* = <.001
Second generation	12.7 (11.7-13.8)	44.0 (42.3-45.6)	43.3 (41.7-45.0)	Cramér's V. = .059
No migration	8.1 (7.0-9.4)	50.9 (48.8-53.1)	41.0 (38.8-43.1)	
Family structure				**N = 7 015**
Others	13.4 (10.6-16.8)	33.3 (29.2-37.7)	53.3 (48.9-57.9)	
Stepfamily	12.7 (10.5-15.2)	46.0 (42.5-49.6)	41.3 (37.9-44.8)	*p* = <.001
Single parents	17.2 (15.3-19.1)	45.8 (43.3-48.3)	37.0 (34.6-39.5)	Cramér's V. = .079
Both parents	9.4 (8.6-10.3)	46.1 (44.7-47.6)	44.5 (43.0-45.9)	
Type of school				**N = 7 340**
ESC-*classes sup.*	9.2 (7.5-11.2)	66.1 (63.0-69.1)	24.6 (21.9-27.4)	
ESG-*classes sup.*	13.8 (11.6-16.4)	54.2 (50.7-57.6)	32.0 (28.8-35.2)	
Formation prof.	16 (13.2-19.4)	44.8 (40.6-48.9)	39.2 (35.1-43.3)	
ESC-*classes inf.*	8.4 (7.0-10.1)	51.5 (48.7-54.3)	40.0 (37.3-42.8)	*p* = <.001
ESG-*classes inf.* (VO)	12.2 (10.7-13.9)	38.1 (35.7-40.5)	49.7 (47.2-52.1)	Cramér's V. = .168
ESG-*classes inf.* (VP)	19.1 (15.7-22.6)	32.0 (28.0-36.2)	48.9 (44.6-53.4)	
EF	9.9 (8.5-11.3)	36.0 (33.8-38.3)	54.1 (51.8-56.5)	

Respondents were asked how they perceived the impact of the COVID-19 pandemic on their family financial situation. Answers categories varied from "very negative" (scored as 1) to "very positive" (scored as 5). The perceived impact was categorized in: (very) negative (categories 1 and 2), neither negative nor positive (category 3) and positive (categories 4 and 5). The results are in % (95% Confidence Interval).

The impact of the COVID-19 pandemic on adolescents' health

Figure 34: Prevalence of the impact of the COVID-19 pandemic on adolescents' health according to sociodemographic groups

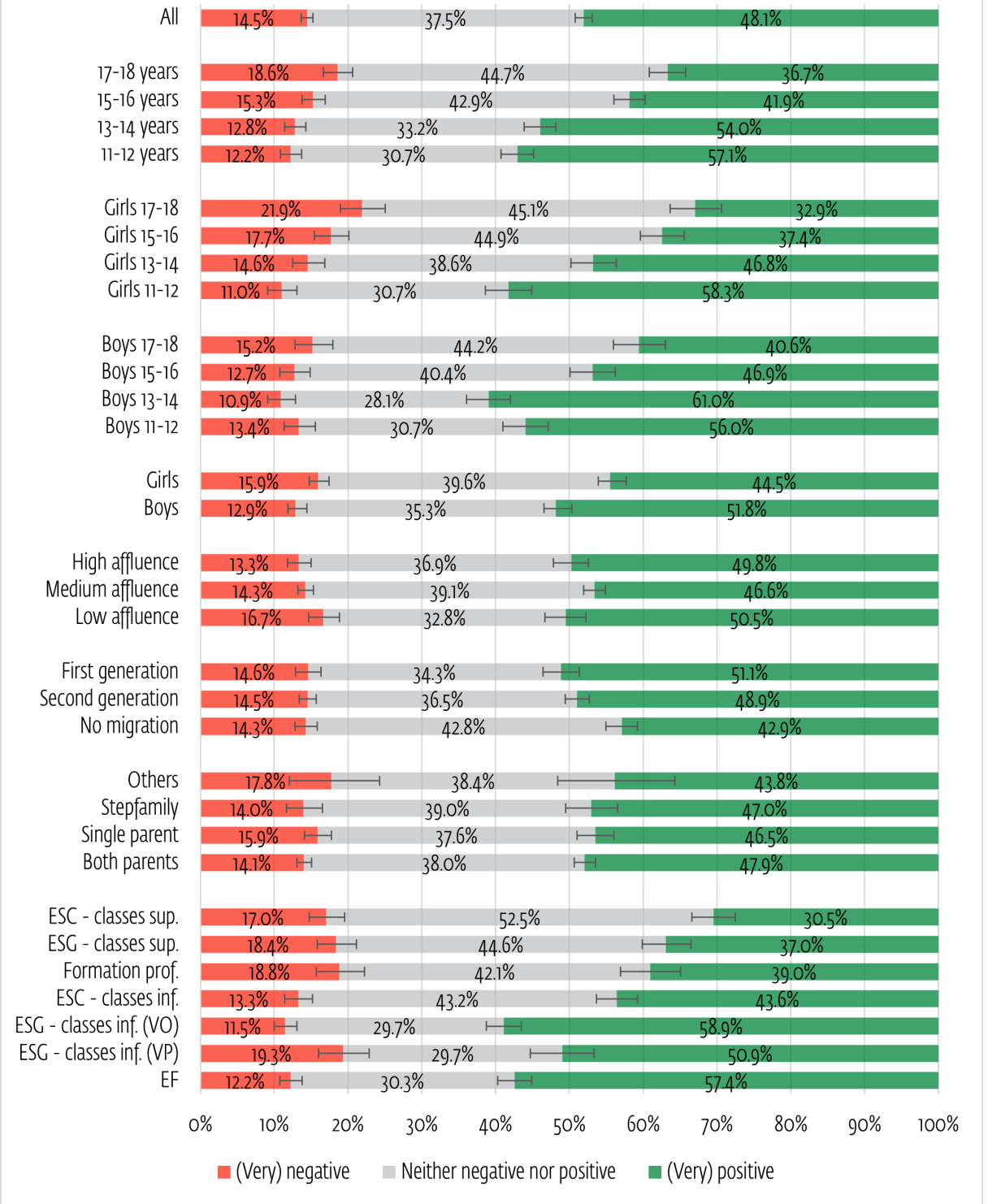


Table 6: Prevalence of the impact of the COVID-19 pandemic on adolescents' health according to sociodemographic groups

	(Very) negative (1-2)	Neither negative nor positive (3)	(Very) positive (4-5)	Chi square test
All				**N = 7 501**
	14.5 (13.7-15.3)	37.5 (36.4-38.6)	48.1 (46.9-49.2)	
Age				**N = 7 501**
11-12	12.2 (10.8-13.8)	30.7 (28.7-32.8)	57.1 (54.8-59.2)	
13-14	12.8 (11.4-14.3)	33.2 (31.2-35.3)	54.0 (51.8-56.1)	*p* = <.001
15-16	15.3 (13.8-16.9)	42.9 (40.8-45.0)	41.9 (39.7-44.0)	γ = -.195
17-18	18.6 (16.7-20.6)	44.7 (42.2-47.2)	36.7 (34.2-39.1)	
Age x Gender				**N = 3 677**
Girls 11-12	11.0 (9.1-13.1)	30.7 (27.9-33.7)	58.3 (55.1-61.4)	
Girls 13-14	14.6 (12.5-16.9)	38.6 (35.7-41.7)	46.8 (43.7-49.9)	*p* = <.001
Girls 15-16	17.7 (15.5-20.1)	44.9 (41.9-47.9)	37.4 (34.5-40.4)	γ = -.240
Girls 17-18	21.9 (19.0-25.1)	45.1 (41.5-48.8)	32.9 (29.6-36.5)	
				N = 3 776
Boys 11-12	13.4 (11.4-15.6)	30.7 (27.9-33.6)	56.0 (52.9-59.1)	
Boys 13-14	10.9 (9.1-12.9)	28.1 (25.4-30.9)	61.0 (58.0-63.9)	*p* = <.001
Boys 15-16	12.7 (10.8-14.9)	40.4 (37.4-43.4)	46.9 (43.8-50.0)	γ = .148
Boys 17-18	15.2 (12.8-17.9)	44.2 (40.7-47.8)	40.6 (37.2-44.2)	
Gender				**N = 7 453**
Girls	15.9 (14.8-17.1)	39.6 (38.0-41.2)	44.5 (42.9-46.1)	*p* = <.001
Boys	12.9 (11.9-14.0)	35.3 (33.8-36.8)	51.8 (50.3-53.4)	Cramér's V. = .075
Family affluence				**N = 7 303**
High	13.3 (11.8-15.0)	36.9 (34.6-39.2)	49.8 (47.4-52.1)	*p* = .371
Medium	14.3 (13.2-15.3)	39.1 (37.7-40.6)	46.6 (45.1-48.1)	γ = .017
Low	16.7 (14.7-18.9)	32.8 (30.3-35.5)	50.5 (47.7-53.2)	
Migration background				**N = 7 280**
First generation	14.6 (12.9-16.4)	34.3 (32.0-36.6)	51.1 (48.7-53.6)	*p* = <.001
Second generation	14.5 (13.4-15.7)	36.5 (35.0-38.1)	48.9 (47.3-50.6)	Cramér's V. = .049
No migration	14.3 (12.8-15.8)	42.8 (40.7-44.9)	42.9 (40.8-45.0)	
Family structure				**N = 7 139**
Others	17.8 (12.1-24.3)	38.4 (31.0-46.5)	43.8 (36.1-52.0)	
Stepfamily	14.0 (11.7-16.5)	39.0 (35.5-42.4)	47.0 (43.6-50.6)	*p* = .535
Single parents	15.9 (14.1-17.8)	37.6 (35.2-40.1)	46.5 (44.0-49.0)	Cramér's V. = .019
Both parents	14.1 (13.1-15.1)	38 (36.7-39.4)	47.9 (46.5-49.4)	
Type of school				**N = 7 501**
ESC-*classes sup.*	17.0 (14.8-19.6)	52.5 (49.3-55.7)	30.5 (27.6-33.4)	
ESG-*classes sup.*	18.4 (15.9-21.2)	44.6 (41.3-48.1)	37.0 (33.8-40.4)	
Formation prof.	18.8 (15.7-22.2)	42.1 (38.1-46.3)	39.0 (35.0-43.2)	
ESC-*classes inf.*	13.3 (11.4-15.2)	43.2 (40.4-46.0)	43.6 (40.8-46.4)	*p* = <.001
ESG-*classes inf.* (VO)	11.5 (10.0-13.1)	29.7 (27.5-31.9)	58.9 (56.5-61.2)	Cramér's V. = .155
ESG-*classes inf.* (VP)	19.3 (16.1-22.9)	29.7 (26.0-33.9)	50.9 (46.6-55.2)	
EF	12.2 (10.8-13.8)	30.3 (28.3-32.5)	57.4 (55.2-59.8)	

Respondents were asked how they perceived the impact of the COVID-19 pandemic on their health. Answers categories varied from "very negative" (scored as 1) to "very positive" (scored as 5). The perceived impact was categorized in: (very) negative (categories 1 and 2), neither negative nor positive (category 3) and positive (categories 4 and 5). The results are in % (95% Confidence Interval).

The impact of the COVID-19 pandemic on adolescents' relationships with family

Figure 35: Prevalence of the impact of the COVID-19 pandemic on adolescents' relationships with family according to sociodemographic groups

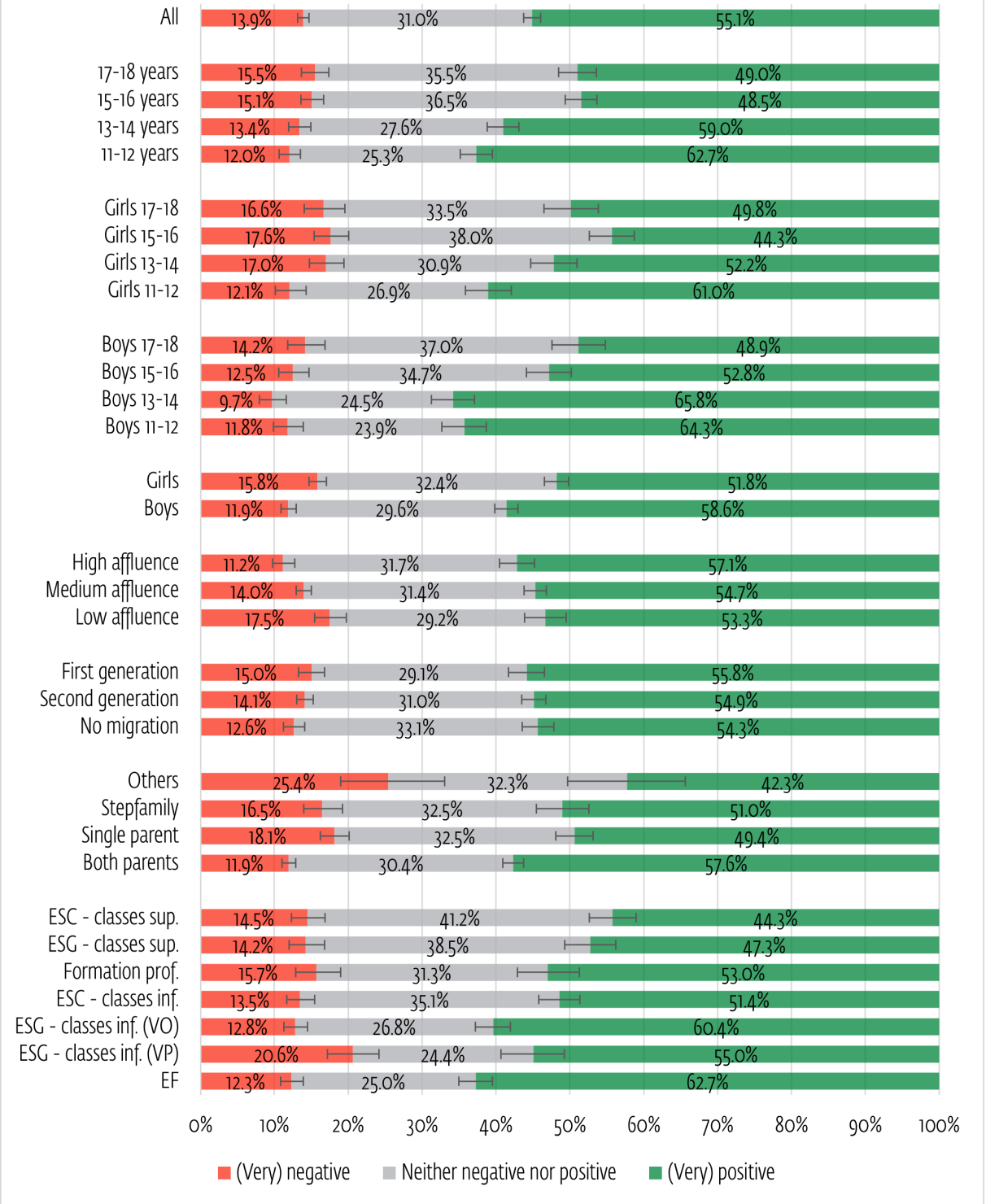


Table 7: Prevalence of the impact of the COVID-19 pandemic on adolescents' relationships with family according to sociodemographic groups

	(Very) negative (1-2)	Neither negative nor positive (3)	(Very) positive (4-5)	Chi square test
All				**N = 7 460**
	13.9 (13.1-14.7)	31.0 (30.0-32.0)	55.1 (54.0-56.2)	
Age				**N = 7 460**
11-12	12.0 (10.6-13.6)	25.3 (23.4-27.3)	62.7 (60.5-64.8)	
13-14	13.4 (12.0-14.9)	27.6 (25.7-29.6)	59.0 (56.9-61.1)	*p* = <.001
15-16	15.1 (13.6-16.7)	36.5 (34.4-38.5)	48.5 (46.3-50.6)	γ = -.144
17-18	15.5 (13.7-17.4)	35.5 (33.1-38.0)	49.0 (46.4-51.6)	
Age x Gender				**N = 3 646**
Girls 11-12	12.1 (10.1-14.3)	26.9 (24.1-29.8)	61.0 (57.9-64.2)	
Girls 13-14	17.0 (14.7-19.4)	30.9 (28.0-33.8)	52.2 (49.1-55.3)	*p* = <.001
Girls 15-16	17.6 (15.4-20.0)	38.0 (35.1-41.1)	44.3 (41.3-47.4)	γ = -.124
Girls 17-18	16.6 (14.0-19.6)	33.5 (30.1-37.0)	49.8 (46.2-53.6)	
				N = 3 762
Boys 11-12	11.8 (9.9-13.9)	23.9 (21.3-26.6)	64.3 (61.3-67.2)	
Boys 13-14	9.7 (8.0-11.6)	24.5 (21.9-27.2)	65.8 (62.9-68.7)	*p* = <.001
Boys 15-16	12.5 (10.6-14.7)	34.7 (31.8-37.7)	52.8 (49.7-55.8)	γ = -.162
Boys 17-18	14.2 (11.8-16.8)	37.0 (33.6-40.6)	48.9 (45.3-52.5)	
Gender				**N = 7 408**
Girls	15.8 (14.7-17.0)	32.4 (30.9-33.9)	51.8 (50.2-53.4)	*p* = <.001
Boys	11.9 (10.9-12.9)	29.6 (28.1-31.0)	58.6 (57.0-60.1)	Cramér's V. = .074
Family affluence				**N = 7 270**
High	11.2 (9.7-12.8)	31.7 (29.5-34.0)	57.1 (54.8-59.5)	*p* = .001
Medium	14.0 (13.0-15.0)	31.4 (30.0-32.7)	54.7 (53.2-56.1)	γ = .061
Low	17.5 (15.5-19.7)	29.2 (26.7-31.8)	53.3 (50.5-56.1)	
Migration background				**N = 7 245**
First generation	15.0 (13.3-16.8)	29.1 (26.9-31.4)	55.8 (53.4-58.3)	*p* = .063
Second generation	14.1 (13.0-15.3)	31.0 (29.5-32.5)	54.9 (53.2-56.5)	Cramér's V. = .025
No migration	12.6 (11.2-14.1)	33.1 (31.1-35.2)	54.3 (52.2-56.5)	
Family structure				**N = 7 108**
Others	25.4 (19.0-33.0)	32.3 (25.2-40.3)	42.3 (34.3-50.2)	
Stepfamily	16.5 (14.0-19.2)	32.5 (29.2-35.8)	51.0 (47.5-54.6)	*p* = <.001
Single parents	18.1 (16.3-20.1)	32.5 (30.2-34.9)	49.4 (46.9-51.9)	Cramér's V. = .072
Both parents	11.9 (11.0-12.9)	30.4 (29.1-31.8)	57.6 (56.2-59.0)	
Type of school				**N = 7 460**
ESC-*classes sup.*	14.5 (12.3-16.8)	41.2 (38.1-44.4)	44.3 (41.1-47.5)	
ESG-*classes sup.*	14.2 (12.0-16.8)	38.5 (35.2-41.9)	47.3 (43.9-50.7)	
Formation prof.	15.7 (12.9-19.0)	31.3 (27.5-35.3)	53.0 (48.9-57.3)	
ESC-*classes inf.*	13.5 (11.7-15.5)	35.1 (32.5-37.8)	51.4 (48.6-54.2)	*p* = <.001
ESG-*classes inf.* (VO)	12.8 (11.3-14.5)	26.8 (24.7-29.0)	60.4 (58.0-62.7)	Cramér's V. = .108
ESG-*classes inf.* (VP)	20.6 (17.2-24.2)	24.4 (20.8-28.3)	55.0 (50.6-59.2)	
EF	12.3 (10.8-13.9)	25.0 (23.0-27.0)	62.7 (60.5-65.0)	

Respondents were asked how they perceived the impact of the COVID-19 pandemic on their relationship with family. Answers categories varied from "very negative" (scored as 1) to "very positive" (scored as 5). The perceived impact was categorized in: (very) negative (categories 1 and 2), neither negative nor positive (category 3) and positive (categories 4 and 5). The results are in % (95% Confidence Interval).

The impact of the COVID-19 pandemic on adolescents' relationships with friends

Figure 36: Prevalence of the impact of the COVID-19 pandemic on adolescents' relationships with friends according to sociodemographic groups

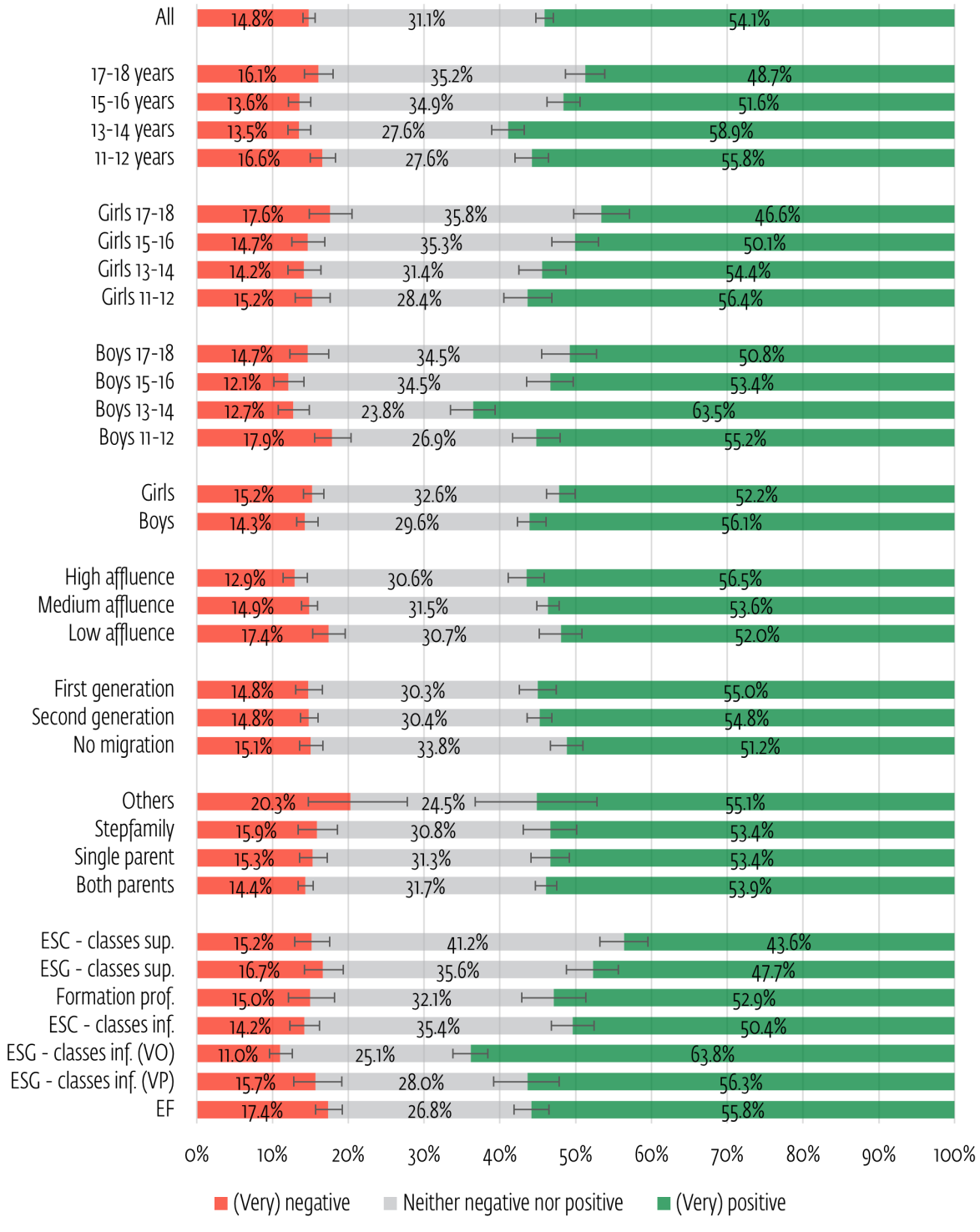


Table 8: Prevalence of the impact of the COVID-19 pandemic on adolescents' relationships with friends according to sociodemographic groups

	(Very) negative (1-2)	Neither negative nor positive (3)	(Very) positive (4-5)	Chi square test
All				**N = 7 418**
	14.8 (14.0-15.6)	31.1 (30.1-32.2)	54.1 (53.0-55.2)	
Age				**N = 7 418**
11-12	16.6 (15.0-18.3)	27.6 (25.7-29.7)	55.8 (53.5-58.0)	
13-14	13.5 (12.1-15.0)	27.6 (25.7-29.6)	58.9 (56.7-61.0)	*p* = <.001
15-16	13.6 (12.1-15.1)	34.9 (32.8-36.9)	51.6 (49.4-53.7)	γ = -.062
17-18	16.1 (14.2-18.0)	35.2 (32.8-37.7)	48.7 (46.1-51.3)	
Age x Gender				**N = 3 636**
Girls 11-12	15.2 (13.0-17.6)	28.4 (25.6-31.3)	56.4 (53.2-59.6)	
Girls 13-14	14.2 (12.1-16.4)	31.4 (28.6-34.4)	54.4 (51.4-57.6)	*p* = <.001
Girls 15-16	14.7 (12.6-16.9)	35.3 (32.4-38.3)	50.1 (47.0-53.1)	γ = -.084
Girls 17-18	17.6 (14.9-20.5)	35.8 (32.3-39.4)	46.6 (43.0-50.3)	
				N = 3 732
Boys 11-12	17.9 (15.6-20.4)	26.9 (24.2-29.7)	55.2 (52.1-58.3)	
Boys 13-14	12.7 (10.8-14.9)	23.8 (21.2-26.4)	63.5 (60.6-66.5)	*p* = .078
Boys 15-16	12.1 (10.2-14.2)	34.5 (31.6-37.5)	53.4 (50.2-56.4)	γ = -.039
Boys 17-18	14.7 (12.3-17.4)	34.5 (31.2-38.0)	50.8 (47.1-54.3)	
Gender				**N = 7 369**
Girls	15.2 (14.1-16.4)	32.6 (31.1-34.1)	52.2 (50.6-53.8)	*p* = .003
Boys	14.3 (13.2-15.4)	29.6 (28.2-31.1)	56.1 (54.5-57.7)	Cramér's V. = .039
Family affluence				**N = 7 225**
High	12.9 (11.4-14.6)	30.6 (28.4-32.8)	56.5 (54.1-58.8)	*p* = .002
Medium	14.9 (13.8-15.9)	31.5 (30.1-32.9)	53.6 (52.1-55.1)	γ = .058
Low	17.4 (15.3-19.6)	30.7 (28.1-33.3)	52.0 (49.1-54.7)	
Migration background				**N = 7 204**
First generation	14.8 (13.1-16.6)	30.3 (28.0-32.5)	55.0 (52.5-57.4)	*p* = .060
Second generation	14.8 (13.7-16.0)	30.4 (28.9-31.9)	54.8 (53.1-56.4)	Cramér's V. = .025
No migration	15.1 (13.6-16.7)	33.8 (31.7-35.9)	51.2 (49.0-53.3)	
Family structure				**N = 7 062**
Others	20.3 (14.7-27.8)	24.5 (18.3-32.3)	55.1 (47.0-63.1)	
Stepfamily	15.9 (13.4-18.6)	30.8 (27.6-34.1)	53.4 (49.8-56.9)	*p* = .318
Single parents	15.3 (13.6-17.2)	31.3 (29.0-33.7)	53.4 (50.9-55.9)	Cramér's V. = .022
Both parents	14.4 (13.4-15.4)	31.7 (30.4-33.1)	53.9 (52.5-55.3)	
Type of school				**N = 7 418**
ESC-*classes sup.*	15.2 (13.0-17.5)	41.2 (38.0-44.3)	43.6 (40.5-46.8)	
ESG-*classes sup.*	16.7 (14.2-19.3)	35.6 (32.3-38.9)	47.7 (44.2-51.1)	
Formation prof.	15.0 (12.1-18.2)	32.1 (28.3-36.2)	52.9 (48.7-57.1)	
ESC-*classes inf.*	14.2 (12.3-16.2)	35.4 (32.8-38.2)	50.4 (47.6-53.2)	*p* = <.001
ESG-*classes inf.* (VO)	11.0 (9.6-12.6)	25.1 (23.1-27.3)	63.8 (61.5-66.1)	Cramér's V. = .104
ESG-*classes inf.* (VP)	15.7 (12.8-19.1)	28.0 (24.2-32.0)	56.3 (51.9-60.5)	
EF	17.4 (15.7-19.2)	26.8 (24.8-28.9)	55.8 (53.5-58.1)	

Respondents were asked how they perceived the impact of the COVID-19 pandemic on their relationship with friends. Answers categories varied from "very negative" (scored as 1) to "very positive" (scored as 5). The perceived impact was categorized in: (very) negative (categories 1 and 2), neither negative nor positive (category 3) and positive (categories 4 and 5). The results are in % (95% Confidence Interval).

The impact of the COVID-19 pandemic on adolescents' mental health

Figure 37: Prevalence of the impact of the COVID-19 pandemic on adolescents' mental health according to sociodemographic groups

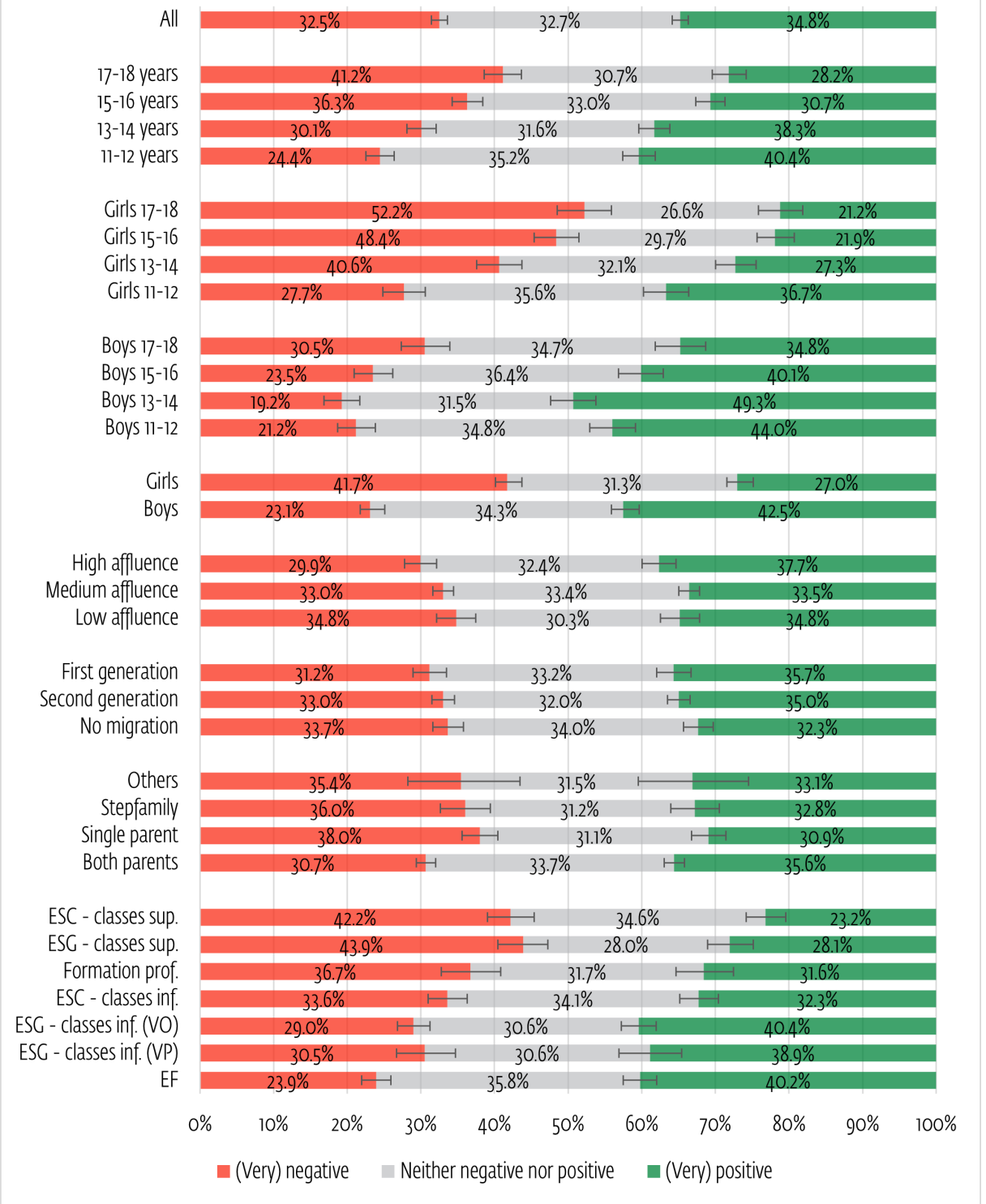


Table 9: Prevalence of the impact of the COVID-19 pandemic on adolescents' mental health according to sociodemographic groups

	(Very) negative (1-2)	Neither negative nor positive (3)	(Very) positive (4-5)	Chi square test
All				**N = 7 441**
	32.5 (31.5-33.6)	32.7 (31.7-33.8)	34.8 (33.7-35.8)	
Age				**N = 7 441**
11-12	24.4 (22.5-26.4)	35.2 (33.0-37.3)	40.4 (38.2-42.6)	
13-14	30.1 (28.1-32.1)	31.6 (29.6-33.7)	38.3 (36.2-40.5)	*p* = <.001
15-16	36.3 (34.3-38.4)	33.0 (31.0-35.1)	30.7 (28.7-32.7)	γ = -.162
17-18	41.2 (38.6-43.7)	30.7 (28.4-33.1)	28.2 (25.9-30.5)	
Age x Gender				**N = 3 646**
Girls 11-12	27.7 (24.9-30.6)	35.6 (32.6-38.7)	36.7 (33.6-39.8)	
Girls 13-14	40.6 (37.6-43.7)	32.1 (29.3-35.1)	27.3 (24.5-30.1)	*p* = <.001
Girls 15-16	48.4 (45.4-51.5)	29.7 (27.0-32.6)	21.9 (19.5-24.5)	γ = -.226
Girls 17-18	52.2 (48.5-55.9)	26.6 (23.4-30.0)	21.2 (18.3-24.3)	
				N = 3 748
Boys 11-12	21.2 (18.7-23.8)	34.8 (31.9-37.8)	44.0 (40.9-47.1)	
Boys 13-14	19.2 (16.9-21.7)	31.5 (28.6-34.3)	49.3 (46.2-52.3)	*p* = <.001
Boys 15-16	23.5 (21.0-26.2)	36.4 (33.5-39.5)	40.1 (37.0-43.1)	γ = -.110
Boys 17-18	30.5 (27.3-33.9)	34.7 (31.4-38.2)	34.8 (31.4-38.2)	
Gender				**N = 7 393**
Girls	41.7 (40.1-43.3)	31.3 (29.8-32.8)	27.0 (25.6-28.5)	*p* = <.001
Boys	23.1 (21.8-24.5)	34.3 (32.8-35.8)	42.5 (41.0-44.1)	Cramér's V. = .212
Family affluence				**N = 7 256**
High	29.9 (27.8-32.2)	32.4 (30.2-34.6)	37.7 (35.4-40.0)	*p* = .006
Medium	33.0 (31.7-34.5)	33.4 (32.0-34.8)	33.5 (32.2-35.0)	γ = .048
Low	34.8 (32.2-37.5)	30.3 (27.8-32.9)	34.8 (32.3-37.6)	
Migration background				**N = 7 230**
First generation	31.2 (28.9-33.5)	33.2 (30.9-35.5)	35.7 (33.4-38.1)	*p* = .131
Second generation	33.0 (31.5-34.5)	32.0 (30.5-33.6)	35.0 (33.4-36.5)	Cramér's V. = .022
No migration	33.7 (31.7-35.8)	34.0 (32.0-36.1)	32.3 (30.3-34.4)	
Family structure				**N = 7 089**
Others	35.4 (28.2-43.5)	31.5 (24.5-39.3)	33.1 (25.7-40.7)	
Stepfamily	36.0 (32.7-39.5)	31.2 (28.0-34.6)	32.8 (29.5-36.1)	*p* = <.001
Single parents	38.0 (35.6-40.5)	31.1 (28.8-33.5)	30.9 (28.7-33.3)	Cramér's V. = .048
Both parents	30.7 (29.4-32.0)	33.7 (32.4-35.1)	35.6 (34.2-37.0)	
Type of school				**N = 7 441**
ESC-*classes sup.*	42.2 (39.1-45.4)	34.6 (31.6-37.6)	23.2 (20.6-26.0)	
ESG-*classes sup.*	43.9 (40.5-47.3)	28.0 (25.0-31.2)	28.1 (25.1-31.3)	
Formation prof.	36.7 (32.8-40.9)	31.7 (28.0-35.8)	31.6 (27.8-35.6)	
ESC-*classes inf.*	33.6 (31.0-36.3)	34.1 (31.5-36.8)	32.3 (29.7-35.0)	*p* = <.001
ESG-*classes inf.* (VO)	29.0 (26.8-31.2)	30.6 (28.4-32.9)	40.4 (38.1-42.8)	Cramér's V. = .119
ESG-*classes inf.* (VP)	30.5 (26.7-34.7)	30.6 (26.7-34.7)	38.9 (34.7-43.2)	
EF	23.9 (22.0-25.9)	35.8 (33.6-38.1)	40.2 (38.0-42.5)	

Respondents were asked how they perceived the impact of the COVID-19 pandemic on their mental health. Answers categories varied from "very negative" (scored as 1) to "very positive" (scored as 5). The perceived impact was categorized in: (very) negative (categories 1 and 2), neither negative nor positive (category 3) and positive (categories 4 and 5). The results are in % (95% Confidence Interval).

The impact of the COVID-19 pandemic on adolescents' school performance

Figure 38: Prevalence of the impact of the COVID-19 pandemic on adolescents' school performance according to sociodemographic groups

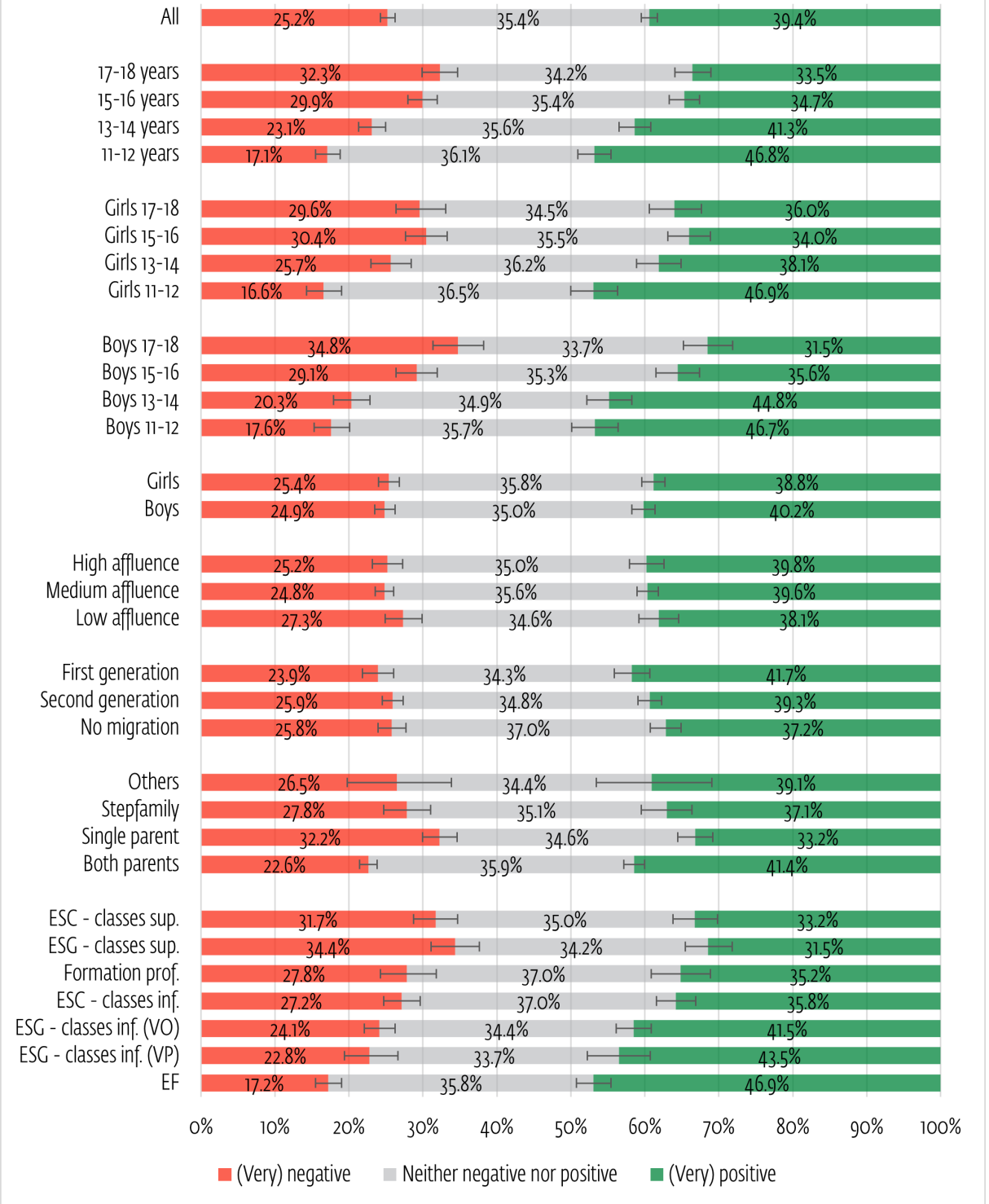


Table 10: Prevalence of the impact of the COVID-19 pandemic on adolescents' school performance according to sociodemographic groups

	(Very) negative (1-2)	Neither negative nor positive (3)	(Very) positive (4-5)	Chi square test
All				**N = 7 481**
	25.2 (24.2-26.2)	35.4 (34.3-36.5)	39.4 (38.3-40.5)	
Age				**N = 7 481**
11-12	17.1 (15.5-18.8)	36.1 (34.0-38.2)	46.8 (44.6-49.0)	
13-14	23.1 (21.3-25.0)	35.6 (33.5-37.7)	41.3 (39.2-43.5)	*p* = <.001
15-16	29.9 (28.0-31.9)	35.4 (33.3-37.5)	34.7 (32.7-36.8)	γ = -.168
17-18	32.3 (29.9-34.7)	34.2 (31.8-36.6)	33.5 (31.2-36.0)	
Age x Gender				**N = 3 661**
Girls 11-12	16.6 (14.3-19.0)	36.5 (33.6-39.7)	46.9 (43.8-50.2)	
Girls 13-14	25.7 (23.0-28.4)	36.2 (33.2-39.2)	38.1 (35.1-41.1)	*p* = <.001
Girls 15-16	30.4 (27.7-33.3)	35.5 (32.6-38.5)	34.0 (31.2-37.0)	γ = -.143
Girls 17-18	29.6 (26.3-33.1)	34.5 (31.0-38.0)	36.0 (32.6-39.6)	
				N = 3 769
Boys 11-12	17.6 (15.3-20.1)	35.7 (32.7-38.7)	46.7 (43.6-49.9)	
Boys 13-14	20.3 (17.9-22.9)	34.9 (32.0-37.8)	44.8 (41.8-47.9)	*p* = <.001
Boys 15-16	29.1 (26.4-32.0)	35.3 (32.4-38.3)	35.6 (32.7-38.6)	γ = -.190
Boys 17-18	34.8 (31.4-38.2)	33.7 (30.3-37.1)	31.5 (28.2-34.9)	
Gender				**N = 7 431**
Girls	25.4 (24.0-26.8)	35.8 (34.2-37.3)	38.8 (37.3-40.4)	*p* = .489
Boys	24.9 (23.5-26.3)	35.0 (33.5-36.5)	40.2 (38.6-41.8)	Cramér's V. = .214
Family affluence				**N = 7 286**
High	25.2 (23.1-27.3)	35.0 (32.8-37.3)	39.8 (37.5-42.1)	*p* = .279
Medium	24.8 (23.5-26.1)	35.6 (34.2-37.0)	39.6 (38.2-41.1)	γ = .019
Low	27.3 (24.9-29.9)	34.6 (32.0-37.3)	38.1 (35.4-40.8)	
Migration background				**N = 7 267**
First generation	23.9 (21.8-26.0)	34.3 (32.1-36.7)	41.7 (39.4-44.2)	*p* = .059
Second generation	25.9 (24.5-27.3)	34.8 (33.2-36.3)	39.3 (37.8-40.9)	Cramér's V. = .025
No migration	25.8 (23.9-27.7)	37.0 (35.0-39.2)	37.2 (35.1-39.3)	
Family structure				**N = 7 127**
Others	26.5 (19.8-33.9)	34.4 (27.2-42.4)	39.1 (31.6-47.2)	
Stepfamily	27.8 (24.7-31.0)	35.1 (31.9-38.6)	37.1 (33.7-40.5)	*p* = <.001
Single parents	32.2 (30.0-34.6)	34.6 (32.3-37.0)	33.2 (30.9-35.6)	Cramér's V. = .068
Both parents	22.6 (21.4-23.8)	35.9 (34.6-37.3)	41.4 (40.0-42.8)	
Type of school				**N = 7 481**
ESC-*classes sup.*	31.7 (28.8-34.7)	35.0 (32.1-38.2)	33.2 (30.3-36.3)	
ESG-*classes sup.*	34.4 (31.1-37.6)	34.2 (31.0-37.5)	31.5 (28.4-34.7)	
Formation prof.	27.8 (24.3-31.8)	37.0 (33.0-41.1)	35.2 (31.2-39.2)	
ESC-*classes inf.*	27.2 (24.7-29.7)	37.0 (34.4-39.8)	35.8 (33.2-38.5)	*p* = <.001
ESG-*classes inf.* (VO)	24.1 (22.1-26.2)	34.4 (32.1-36.7)	41.5 (39.1-43.9)	Cramér's V. = .102
ESG-*classes inf.* (VP)	22.8 (19.4-26.6)	33.7 (29.7-37.9)	43.5 (39.2-47.7)	
EF	17.2 (15.5-19.0)	35.8 (33.6-38.1)	46.9 (44.6-49.3)	

Respondents were asked how they perceived the impact of the COVID-19 pandemic on their school performance. Answers categories varied from "very negative" (scored as 1) to "very positive" (scored as 5). The perceived impact was categorized in: (very) negative (categories 1 and 2), neither negative nor positive (category 3) and positive (categories 4 and 5). The results are in % (95% Confidence Interval).

The impact of the COVID-19 pandemic on adolescents' physical activity

Figure 39: Prevalence of the impact of the COVID-19 pandemic on adolescents' physical activity according to sociodemographic groups

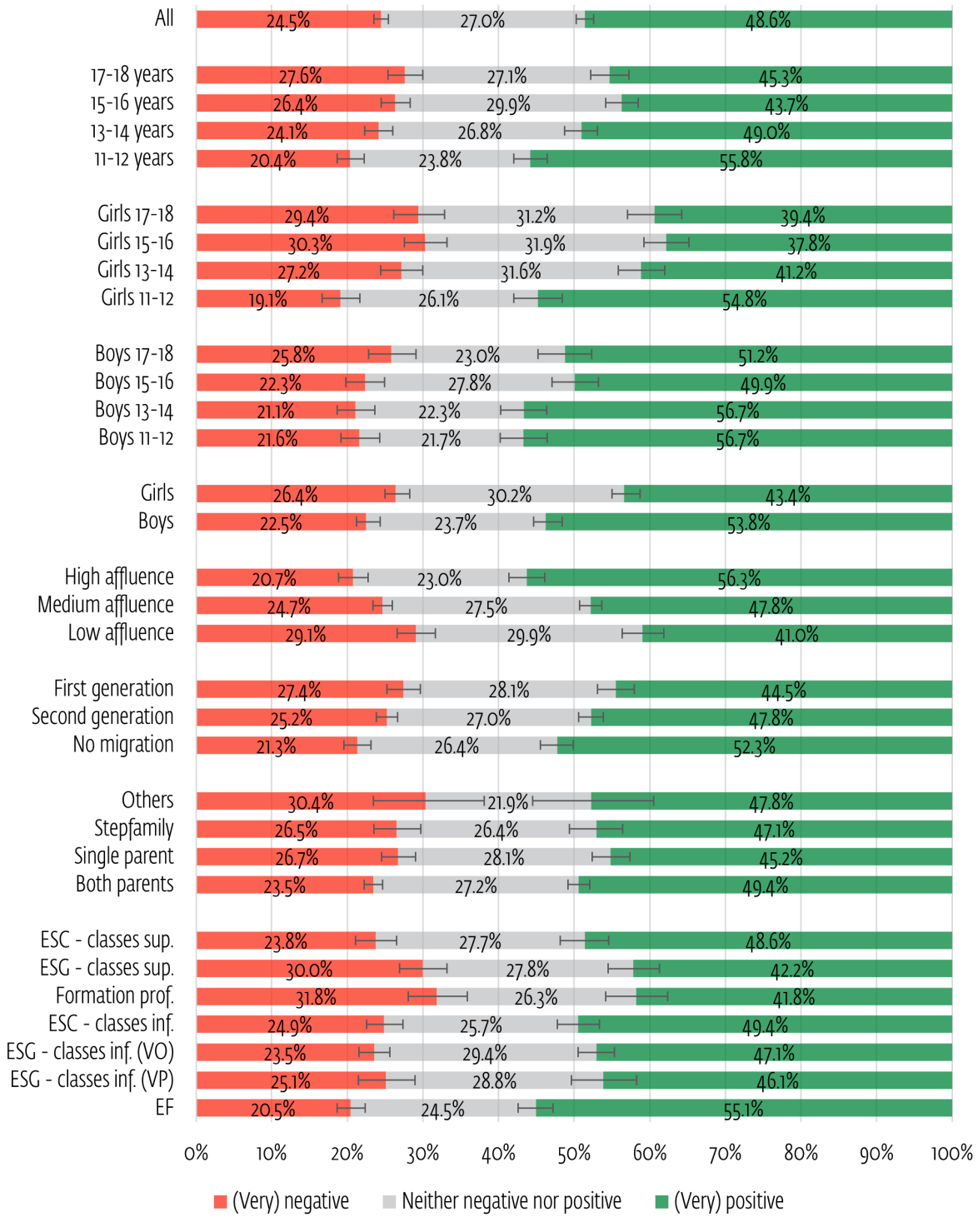


Table 11: Prevalence of the impact of the COVID-19 pandemic on adolescents' physical activity according to sociodemographic groups

	(Very) negative (1-2)	Neither negative nor positive (3)	(Very) positive (4-5)	Chi square test
All				**N = 7 482**
	24.5 (23.5-25.5)	27.0 (25.9-28.0)	48.6 (47.5-49.7)	
Age				**N = 7 482**
11-12	20.4 (18.6-22.2)	23.8 (21.9-25.7)	55.8 (53.6-58.0)	
13-14	24.1 (22.3-26.0)	26.8 (24.9-28.8)	49.0 (46.8-51.2)	*p* = <.001
15-16	26.4 (24.5-28.3)	29.9 (28.0-31.9)	43.7 (41.6-45.9)	γ = -0.108
17-18	27.6 (25.4-30.0)	27.1 (24.9-29.4)	45.3 (42.8-47.8)	
Age x Gender				**N = 3 654**
Girls 11-12	19.1 (16.6-21.7)	26.1 (23.4-29.0)	54.8 (51.7-58.0)	
Girls 13-14	27.2 (24.4-30.0)	31.6 (28.8-34.6)	41.2 (38.2-44.3)	*p* = <.001
Girls 15-16	30.3 (27.5-33.2)	31.9 (29.1-34.8)	37.8 (34.9-40.8)	γ = -0.148
Girls 17-18	29.4 (26.1-32.8)	31.2 (27.9-34.7)	39.4 (35.8-43.0)	
				N = 3 777
Boys 11-12	21.6 (19.1-24.3)	21.7 (19.2-24.4)	56.7 (53.6-59.8)	
Boys 13-14	21.1 (18.7-23.7)	22.3 (19.8-24.9)	56.7 (53.6-59.7)	*p* = 0.002
Boys 15-16	22.3 (19.8-25.0)	27.8 (25.0-30.6)	49.9 (46.9-53.0)	γ = -0.067
Boys 17-18	25.8 (22.8-29.1)	23.0 (20.0-26.0)	51.2 (47.6-54.8)	
Gender				**N = 7 431**
Girls	26.4 (25.0-27.8)	30.2 (28.7-31.7)	43.4 (41.8-45.0)	*p* = <.001
Boys	22.5 (21.2-23.9)	23.7 (22.4-25.1)	53.8 (52.2-55.4)	Cramér's V. = 0.105
Family affluence				**N = 7 291**
High	20.7 (18.9-22.7)	23.0 (21.1-25.1)	56.3 (53.9-58.6)	*p* = <.001
Medium	24.7 (23.4-25.9)	27.5 (26.2-28.9)	47.8 (46.3-49.3)	γ = 0.144
Low	29.1 (26.6-31.7)	29.9 (27.5-32.6)	41.0 (38.3-43.8)	
Migration background				**N = 7 262**
First generation	27.4 (25.3-29.7)	28.1 (25.9-30.4)	44.5 (42.1-47.0)	*p* = <.001
Second generation	25.2 (23.8-26.7)	27.0 (25.5-28.4)	47.8 (46.1-49.4)	Cramér's V. = 0.043
No migration	21.3 (19.6-23.1)	26.4 (24.6-28.4)	52.3 (50.1-54.4)	
Family structure				**N = 7 129**
Others	30.4 (23.4-38.1)	21.9 (15.6-28.8)	47.8 (40.0-56.0)	
Stepfamily	26.5 (23.5-29.8)	26.4 (23.4-29.6)	47.1 (43.5-50.5)	*p* = 0.019
Single parents	26.7 (24.6-29.0)	28.1 (25.9-30.4)	45.2 (42.7-47.7)	Cramér's V. = 0.033
Both parents	23.5 (22.3-24.7)	27.2 (25.9-28.4)	49.4 (47.9-50.8)	
Type of school				**N = 7 482**
ESC-*classes sup.*	23.8 (21.1-26.5)	27.7 (24.9-30.6)	48.6 (45.3-51.7)	
ESG-*classes sup.*	30.0 (26.9-33.2)	27.8 (24.9-31.0)	42.2 (38.9-45.7)	
Formation prof.	31.8 (28.1-35.9)	26.3 (22.9-30.2)	41.8 (37.8-46.1)	
ESC-*classes inf.*	24.9 (22.5-27.4)	25.7 (23.3-28.2)	49.4 (46.7-52.3)	*p* = <.001
ESG-*classes inf.* (VO)	23.5 (21.5-25.6)	29.4 (27.2-31.6)	47.1 (44.6-49.4)	Cramér's V. = 0.070
ESG-*classes inf.* (VP)	25.1 (21.4-28.9)	28.8 (25.0-32.8)	46.1 (41.9-50.5)	
EF	20.5 (18.7-22.4)	24.5 (22.5-26.5)	55.1 (52.8-57.4)	

Respondents were asked how they perceived the impact of the COVID-19 pandemic on their physical activity. Answers categories varied from "very negative" (scored as 1) to "very positive" (scored as 5). The perceived impact was categorized in: (very) negative (categories 1 and 2), neither negative nor positive (category 3) and positive (categories 4 and 5). The results are in % (95% Confidence Interval).

The impact of the COVID-19 pandemic on what adolescents' ate or drank

Figure 40: Prevalence of the impact of the COVID-19 pandemic on what adolescents' ate or drank according to sociodemographic groups

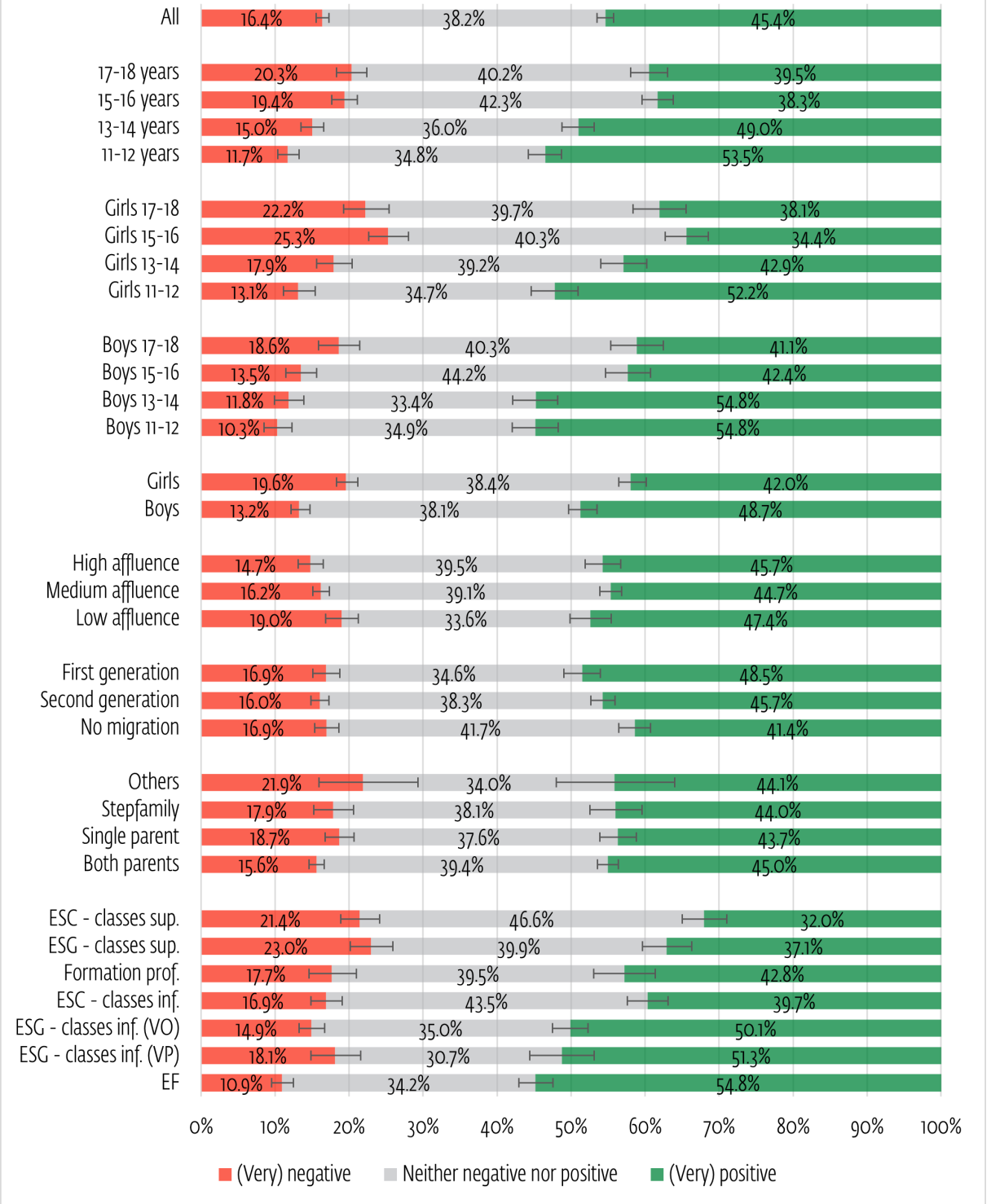


Table 12: Prevalence of the impact of the COVID-19 pandemic on what adolescents' ate or drank according to sociodemographic groups

	(Very) negative (1-2)	Neither negative nor positive (3)	(Very) positive (4-5)	Chi square test
All				**N = 7 452**
	16.4 (15.6-17.3)	38.2 (37.1-39.4)	45.4 (44.2-46.5)	
Age				**N = 7 452**
11-12	11.7 (10.4-13.2)	34.8 (32.7-36.9)	53.5 (51.3-55.7)	
13-14	15.0 (13.5-16.6)	36.0 (33.9-38.1)	49.0 (46.8-51.2)	*p* = <.001
15-16	19.4 (17.7-21.1)	42.3 (40.2-44.5)	38.3 (36.2-40.5)	γ = -0.164
17-18	20.3 (18.3-22.4)	40.2 (37.8-42.8)	39.5 (37.0-42.0)	
Age x Gender				**N = 3 646**
Girls 11-12	13.1 (11.1-15.5)	34.7 (31.7-37.7)	52.2 (49.0-55.4)	
Girls 13-14	17.9 (15.6-20.4)	39.2 (36.2-42.3)	42.9 (39.8-46.0)	*p* = <.001
Girls 15-16	25.3 (22.7-28.0)	40.3 (37.4-43.4)	34.4 (31.5-37.3)	γ = -0.168
Girls 17-18	22.2 (19.3-25.4)	39.7 (36.2-43.4)	38.1 (34.5-41.7)	
				N = 3 755
Boys 11-12	10.3 (8.5-12.3)	34.9 (31.9-37.9)	54.8 (51.7-57.9)	
Boys 13-14	11.8 (9.9-13.9)	33.4 (30.5-36.3)	54.8 (51.7-57.8)	*p* = <.001
Boys 15-16	13.5 (11.4-15.6)	44.2 (41.2-47.3)	42.4 (39.3-45.4)	γ = -0.162
Boys 17-18	18.6 (15.9-21.5)	40.3 (36.8-43.9)	41.1 (37.6-44.7)	
Gender				**N = 7 401**
Girls	19.6 (18.3-20.9)	38.4 (36.9-40.0)	42.0 (40.4-43.6)	*p* = <.001
Boys	13.2 (12.2-14.3)	38.1 (36.5-39.6)	48.7 (47.1-50.3)	Cramér's V. = 0.093
Family affluence				**N = 7 261**
High	14.7 (13.1-16.5)	39.5 (37.2-41.9)	45.7 (43.4-48.1)	*p* = 0.543
Medium	16.2 (15.1-17.3)	39.1 (37.7-40.6)	44.7 (43.2-46.2)	γ = 0.011
Low	19.0 (16.8-21.2)	33.6 (31.0-36.3)	47.4 (44.6-50.2)	
Migration background				**N = 7 241**
First generation	16.9 (15.1-18.8)	34.6 (32.3-36.9)	48.5 (46.0-50.9)	*p* = <.001
Second generation	16.0 (14.9-17.3)	38.3 (36.7-39.9)	45.7 (44.1-47.3)	Cramér's V. = 0.040
No migration	16.9 (15.4-18.6)	41.7 (39.5-43.8)	41.4 (39.3-43.5)	
Family structure				**N = 7 107**
Others	21.9 (15.9-29.3)	34.0 (26.5-41.8)	44.1 (36.2-52.3)	
Stepfamily	17.9 (15.2-20.6)	38.1 (34.8-41.7)	44.0 (40.5-47.5)	*p* = 0.054
Single parents	18.7 (16.8-20.7)	37.6 (35.2-40.1)	43.7 (41.2-46.2)	Cramér's V. = 0.029
Both parents	15.6 (14.6-16.7)	39.4 (38-40.8)	45.0 (43.6-46.5)	
Type of school				**N = 7 452**
ESC-*classes sup.*	21.4 (18.9-24.1)	46.6 (43.4-49.8)	32.0 (29.1-35.1)	
ESG-*classes sup.*	23.0 (20.2-25.9)	39.9 (36.6-43.3)	37.1 (33.9-40.5)	
Formation prof.	17.7 (14.6-21.0)	39.5 (35.6-43.8)	42.8 (38.7-47.0)	*p* = <.001
ESC-*classes inf.*	16.9 (14.9-19.1)	43.5 (40.7-46.3)	39.7 (36.9-42.4)	Cramér's V. = 0.122
ESG-*classes inf.* (VO)	14.9 (13.3-16.7)	35.0 (32.7-37.3)	50.1 (47.6-52.5)	
ESG-*classes inf.* (VP)	18.1 (14.9-21.5)	30.7 (26.8-34.8)	51.3 (46.9-55.6)	
EF	10.9 (9.6-12.4)	34.2 (32.1-36.5)	54.8 (52.5-57.2)	

Respondents were asked how they perceived the impact of the COVID-19 pandemic on what they ate or drank. Answers categories varied from "very negative" (scored as 1) to "very positive" (scored as 5). The perceived impact was categorized in: (very) negative (categories 1 and 2), neither negative nor positive (category 3) and positive (categories 4 and 5). The results are in % (95% Confidence Interval).

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List of figures

List of tables

Abbreviations

BMI	Body Mass Index
COVID-19	Coronavirus disease 2019
EF	*Enseignement Fondamental*
ESC	*Enseignement Secondaire Classique*
ESG	*Enseignement Secondaire Général*
FP	*Formation Professionnelle*
HBSC	Health Behaviour in School-aged Children (study/survey)
MVPA	Moderate to Vigorous Physical Activity
PHSM	Public Health and Social Measures
SCRIPT	*Service de Coordination de la Recherche et de l'Innovation pédagogiques et technologiques*
VO	Voie d'orientation
VP	Voie de préparation
VPA	Vigorous Physical Activity
WHO	World Health Organization
YAC	Young People and Covid-19 (study)

Reports on the Luxembourg HBSC Survey 2022

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

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

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

Report on the Luxembourg HBSC Survey 2022

HEALTH BEHAVIOUR IN SCHOOL-AGED CHILDREN (HBSC) STUDY

This report provides information on the impact the COVID-19 pandemic had on the life of 11-18 year old adolescents attending public and private schools whose teaching is based on the national curriculum in 2022.This report also describes how adolescents' (mental) health, health behaviour and perception of their social context have evolved before and through the pandemic.

A (very) positive impact of the COVID-19 pandemic was reported more frequently than a (very) negative impact in all the examined areas. However, the corresponding proportions varied considerably. Mental health and school performance were the two areas that were the most negatively impacted by the pandemic. Relationships with family and friends were the most positively impacted areas. Physical activity was the third most positively impacted area as well as the third most negatively impacted one. In addition, girls, older adolescents, and adolescents from lower family affluence reported a (very) negative impact more frequently than their counterparts. The perception of (very) positive impacts was higher in boys, younger adolescents, and adolescents from a high family affluence background. A large gender gap in favour of boys was observed in the perception of the pandemic impact on adolescents' mental health. Trends in life satisfaction and, especially, in multiple health complaints support adolescent girl's view that their mental health was particularly impacted by the COVID-19 pandemic. Finally, it should be noted that the proportion of answers stressing a (very) negative impact of the pandemic on family financial situation was significantly higher in adolescents from a lower affluence background. This finding might reflect an increase in socioeconomic inequalities due to the pandemic.

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