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JAMES

Youth | Activities | Media – Survey Switzerland

Findings of the JAMES Study 2018

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Web
www.zhaw.ch/psychologie/JAMES
www.swisscom.ch/JAMES/
#jamesstudie2018

Imprint

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Translation: 24translate, St. Gall / proofreading: Erika Eichenberger

Citation reference
Suter, L., Waller, G., Bernath, J., Külling, C., Willemse, I., & Süss, D. (2018). *JAMES – Youth, Activities, Media - Swiss Survey*. Zurich: Zürcher Hochschule für Angewandte Wissenschaften.

Contents

List of abbreviations

ADELE	Activities - Digital - Education - Leisure - Infants (study on media use of children aged 4 to 7 in the context of their families)
CoD	Call of Duty
EBL	Total number of inhabitants, employees and equivalents for overnight stays in hotels and health spas
FAS	Family Affluence Scale
GTA	Grand Theft Auto
JAMES	Youth, Activities, Media - Swiss Survey (study on media use of 12- to 19-year-old adolescents in Switzerland)
JIM	Youth, Information (Multi-)Media (basic investigation of media use of 12- to 19-year-olds in Germany)
MIKE	Media, Interaction, Children, Parents (study on media use of 6- to 13-year-olds in Switzerland)
mpfs	Medienpädagogischer Forschungsverbund Südwest
N	Number of people (usually number of adolescents)
Nm.	Number of mentions
N_{game}	Number of adolescents who at least occasionally engage in gaming
N_{mobile}	Number of adolescents who have their own mobile phone
N_{netw}	Number of adolescents who are registered in at least one social network
p	correlation
PSU	Primary Sampling Units
r	Effect size
SeS	Socio-economic status
SSU	Secondary Sampling Units
ZHAW	Zurich University of Applied Sciences

Preamble and acknowledgements

You are holding the fifth issue of the JAMES study. Once again, we are proud to present you with some fascinating findings. The proliferation of new technologies and innovations is continuing to make rapid progress and is affecting the behaviour of adolescent media recipients. It is therefore worthwhile to continue dealing with this issue, in order to be able to record and classify new consumer habits precisely. Whereas in the first JAMES years it was above all the proliferation of smartphones that radically altered reception behaviour, it is now increasingly music and video streaming services, usually in the form a flat-rate, that are having a major effect on usage habits. What does it mean for individuals' media choices if there is a virtually endless supply of music, series and films available at all hours of the day and night? Does this mean media usage is becoming increasingly individual? Are mass media phenomena, such as linear broadcast blockbusters, a thing of the past? Is everyone going to adjust their media menu increasingly, in line with their personal preferences? Or will group dynamic effects continue to play a role in the future and "media herd behaviour" once again harmonise usage patterns and content preferences? At the moment we cannot answer this question conclusively. Only the future will show where these new possibilities are leading.

At this point, it is a particular priority for us to thank all of the people and institutions who make the JAMES Study possible. *Swisscom* takes pride of place among them: a very big thank you goes to Michael In Albon and Meret Meier. We consider the many years of cooperation with you to be highly valuable and fruitful. Thank you for your confidence in us.

We would also like to sincerely thank our research partners in the Romandie and Ticino. Patrick Amey and Merita Elezi from the University of Geneva conducted the survey in francophone Switzerland. In Italian-speaking Switzerland we were supported by Eleonora Benecchi, Paolo Bory, Petra Mazzoni, Ginevra Benzi, Gloria Dalla Vedova, Luca Calderara, Michela Clavuot, Marta Gadoni, Gabriele Lancini, Francesca Melcarne, Arianna Rizzi and Federica Verena Serrao from the University of Lugano.
Mischa Frei, Marco Perini, Sibylla Salvotelli, Gracinda Granja and Gina Parolari conducted the surveys in schools in German-speaking Switzerland. Gracinda Granja and Paulina Domdey scanned the questionnaires. Mischa Frei, Sibylla Salvotelli, Gina Parolari and Paulina Domdey performed the data validation. Paulina Domdey and Robin Staufer categorised the text data. Thank you very much to all of you for your support and great commitment.

Our heartfelt thanks to Claudia Marolf for proofreading the German version of the report. Equally profound thanks to Silvia Passalacqua, Clara Migliarini and Erika Eichenberger for checking the Italian, French and English translations.

We would also like to thank Sabine Feierabend, Thomas Rathgeb and Theresa Plankenhorn from the Medienpädagogischer Forschungsverbund Südwest (mpfs). Without their pioneering work in the JIM Study, JAMES would not exist in its current form. Thanks to the ongoing exchange of the questionnaires, the studies in both countries remain compatible and comparable.

Thank you very much also to all educational directors, school management and teachers for access to the classrooms. A big thanks to all boys and girls who conscientiously filled out our questionnaires and in this way provided the basis for the JAMES study.

We hope to be able to carry out the JAMES Study once again in 2020 and in this way once again gain some insight into the future.

Media Psychology Section of the ZHAW
Zurich, November 2018

Abstract

JAMES stands for Youth, Activities, Media - Swiss Survey (in German). The JAMES Study has been providing representative figures about the media use of young people in Switzerland since 2010 and is conducted by ZHAW every two years. It illustrates positive and negative aspects of media use and provides scientifically reliable data for authorities, experts and interested parties who deal with youth and media.
In 2018, almost 1'200 adolescents aged 12 to 19 took part in a written survey in the three biggest language regions of Switzerland. The main focus is once again on the use of different media, but other, non-media leisure activities are also surveyed. Apart from analyses of the entire sample, differences regarding socio-demographic characteristics such as age, gender, formal educational level or socio-economic status were considered.
Compared over time, a change is noticeable for the first time in non-media leisure activities: since 2010, the frequency of joint activities with the family has increased while getting together with friends has decreased. 99 % of adolescents in Switzerland have a smartphone. A decline can be observed over the last six years regarding the proliferation of MP3 players/iPods, DVD players and portable gaming consoles. By contrast, the importance of streaming services has risen markedly: over half of all households where adolescents live have a subscription for streaming music and films (e.g. *Spotify*, *Netflix*). Practically all adolescents make daily use of mobile phones and the Internet. Moreover, the vast majority uses social networks, watches videos on the Internet or listens to music at least several times a week. Two-thirds of boys (66 %) engage in gaming daily or several times a week whereas among girls this is only 11 %. The most popular game is *Fortnite,* a game in which the 'battle royale' mode is very popular among both boys and girls. 87 % or 86 % of all adolescents in Switzerland have an account with *Instagram* or *Snapchat*. About three-quarters are active on these two platforms daily; a large proportion of them even make use of them several times daily. In social networks, it is primarily photos, videos or texts of other people that are viewed or read. Fewer than half of adolescents actively post their own contributions several times a week or more frequently. A significant increase in cyber grooming has been identified in the last four years: a third of young people in Switzerland state that they have already been approached online by a stranger with unwelcome sexual intentions.

Keywords: media use, leisure activities, youth, adolescents, device ownership, subscription, mobile phone, cell phone, duration of mobile phone use per day, mobile phone activities, popular apps, tablet, tv, books, magazines, newspapers, radio, fitness tracker, smartwatch, internet, duration of internet use per day, online behaviour, entertainment, communication, information, video games, popular games, duration of video game use per day, social media, social network sites, activities on social network sites, risky online behaviour, privacy, cybermobbing/cyberbullying, cybergrooming, porn, violent media content, popular musicians, popular series.

1 Introduction

The JAMES Study has been conducting a representative investigation of the media and leisure behaviour of young people throughout Switzerland every two years since 2010. The fifth survey round is now available for 2018. In the intervening years, additional analyses of the data are published on special subject areas under the title JAMESfocus. This basic investigation of the everyday media use of young people aged 12 to 19 is supplemented by the MIKE Study, which investigates developments among 6- to 12-year-olds in Switzerland. In addition, media use in families with children aged 4 to 7 was qualitatively examined in the ADELE Study in 2018. See:
www.zhaw.ch/de/psychologie/forschung/medienpsychologie/mediennutzung/

How is the study positioned internationally and what comparisons are possible? The Educational Media Research Association (mpfs) has been conducting similar studies in Germany since 1998. These served as an inspiration for us, and through the cooperation with the team of mpfs, it was possible to compare the findings and trends between Germany and Switzerland directly with each other. See: www.mpfs.de
There has been a similar, regular study for one federal state in Austria since 2007: the Upper Austria Children Media Study (3-10 years), and since 2009 the Upper Austria Young People's Media Study (11-18 years). See: www.edugroup.at/innovation/
We are not aware of any comparable studies in France and Italy. However, these two countries are involved in the research network "EU Kids Online" covering 33 countries, which means comparisons can also be made with these countries focusing on the risks and opportunities for children and young people (9-16 years). See: www.eukidsonline.net
To assess the Internet use of adults in Switzerland and in over 25 other countries, we recommend the "World Internet Project." See: www.worldinternetproject.com
The studies from Switzerland have been carried out regularly since 2011 at the University of Zurich and can be found at: www.mediachange.ch/research/

What distinguishes this study from the above-mentioned Internet studies is the comprehensive look at *all* media activities and also non-media leisure activities of young people. Labels like "smartphone generation" can distort the picture we have of the many different on- and offline contexts in which young people are involved. What is of special interest here as well as in the German JIM Study are the *everyday activities*; consequently, the answer frequencies for "daily/several times a week" are often highlighted in the diagrams. These are then described as activities carried out "regularly" or "frequently." What should of course not be forgotten in this context is that activities carried out less frequently can also be important, but they shape everyday life less. The JAMES Study furthermore focuses on leisure activities; school life is excluded for the most part.

The questionnaire is adjusted with regard to new developments in the media world with each new survey round. This is always done cautiously, because significant changes alter the comparability of the results over time. Nevertheless, we decided to revise several questions in this issue of the JAMES Study. You can find details on this in the methodology section (chapter 2.4).

The findings of the fifth JAMES survey round reveal where the trends of recent years are continuing. But saturation points are also becoming evident, such as the proliferation of tablets. New phenomena are also visible, such as young people once again taking part to an increased extent in activities with their families. In the case of online activities, young people no longer want to share "everything with everyone", but instead prefer semi-public digital spaces or apps like *Snapchat*, where contents can only be retrieved temporarily. The problematic aspects of media use remain at a largely stable level with the exception of an increase in the phenomenon of cybergrooming. New regulatory provisions, such as the EU General Data Protection Regulation, which was introduced in 2018, have not yet been reflected in the everday digital usage of young people. Although *WhatsApp*, the no. 1 means of communication of young people, has now set its minimum age to 16 in its terms and conditions of use, those who are younger also regularly make use of its service. Moreover, as a result of the provision of tablets or laptops

by schools, for example as part of Syllabus21 in German-speaking Switzerland and the module it includes "Media and ICT", the availability of these devices and as a result their use in schools and privately will grow enormously in future. Therefore, it will remain fascinating to continue to follow the developments and deduce recommendations for authorities, parents, providers and the young people themselves.

The findings will be published online in German, French and Italian. This year, the report will also be available for the first time in English as well.

2 Methods

The methodology of the JAMES Study has only changed a little across the various editions. For this reason, the texts in this chapter have in part been adopted from previous reports and adjusted where necessary.

2.1 Sample

As in previous years, the population consists of pupils in Switzerland, who were between 12 and 19 years old during the period of data collection (April to May 2018). According to the latest figures of the Federal Statistical Office (2018b), this was 675'436 young people (see also Table 1). The surveys were conducted in writing during a school lesson (45 minutes) in classrooms. The school survey location guarantees a wide range of young people and has the advantage that adolescents also take part in the study, who, for example, would not take part in a panel survey. Negative effects, which could occur in a panel (e.g. panel selection effects), are avoided in this way. During the survey, one person from the project team was present in the classroom and in this way was able to clear up any questions. Presence of the teacher was optional.

The **initial sample** included **1'192** adolescents. Seventeen cases were excluded on account of their high age. Another case was removed, since the questionnaire had been filled out incorrectly. Consequently, the **net sample** included **1'174** adolescents. The scope of the sub-samples in the three national regions was retained for the current survey following the adjustment in 2016. In German-speaking Switzerland **456** (the target was 400) pupils were questioned, in the Romandie **433** (the target was 400) and in Ticino **285** (the target was 200). Slightly more boys (**596**) than girls (**577**) were included in the sample (see Figure 1). Among the age groups, the two fringe categories (12-/13-year-olds and 18-/19-year-olds) were somewhat smaller than the two central categories. **976** pupils said they had a Swiss family background (85 %). **176** had a migration background (15 %); this proportion was smaller than in previous surveys.

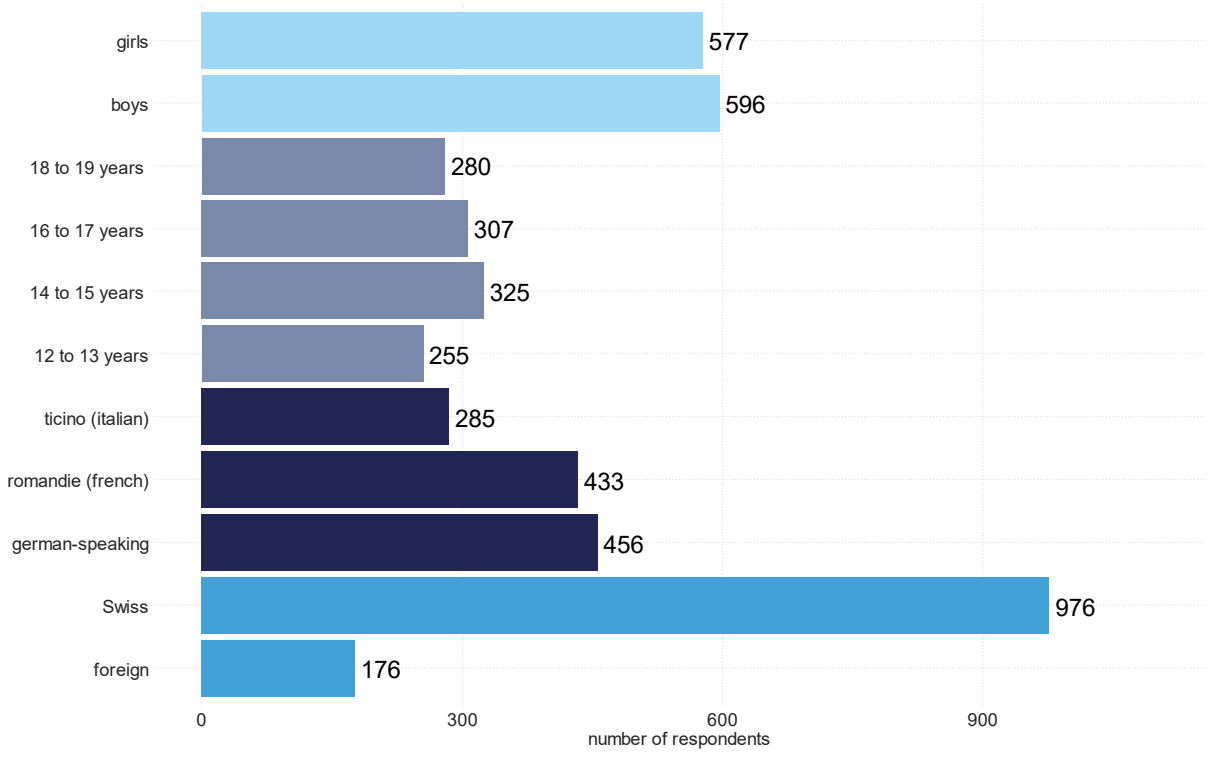

Illustration 1: Sample proliferation in terms of gender, age, region and family background

2.2 Selection procedure

The same procedure was applied as in previous surveys in the sample selection. This means that the sample was initially compiled using a quota scheme, according to region (German-speaking Switzerland, Romandie and Ticino), degree of urban development (city/agglomeration and rural), school type (junior high school, secondary, secondary I, vocational school and secondary II) and class level (six grades within the secondary levels I and II). Against the background of this sample scheme, the survey locations were drawn from within the individual segments by **random selection** (the geographic proliferation of the locations can be seen in Illustration 2). This was done via a list of all Swiss towns (Federal Office of Topography swisstopo, 2018). The schools of these towns - if there were several - were likewise listed and a school then in turn randomly selected from them. If a town was selected that did not have a matching school - this was particularly the case for secondary II schools (vocational schools and upper secondary schools) - the nearest town was selected where there was a corresponding educational institution. Letters were written to the school management of the schools chosen in this way to ask them to participate. The selection of classes (class level was prescribed by the research team) was made by the school management. If the school management declined, another town was selected randomly. It was possible to proceed according to the procedure described above in Romandie and Ticino after approval by the education management. Only the Canton of Geneva rejected taking part in the JAMES Study completely, so that no schools could be invited to participate there.
In general, the readiness to participate was relatively high. The response rate in the schools in German-speaking Switzerland was about 50 %. This is no doubt attributable to the fact that the JAMES Study had already been carried out there since 2010 and many school management departments were already familiar with it.

2.3 Regionalism

The survey locations within the three major language regions can be seen in Illustration 2. It is evident that the locations are spread across a large geographical area. Since the samples in the three regions could not always be selected according to the same procedure, divergences are in part attributable to different sub-samples. For this reason, restraint is called for in interpreting differences between the regions. However, the influence of this circumstance was negligible for the overall analysis and other sub-groups.

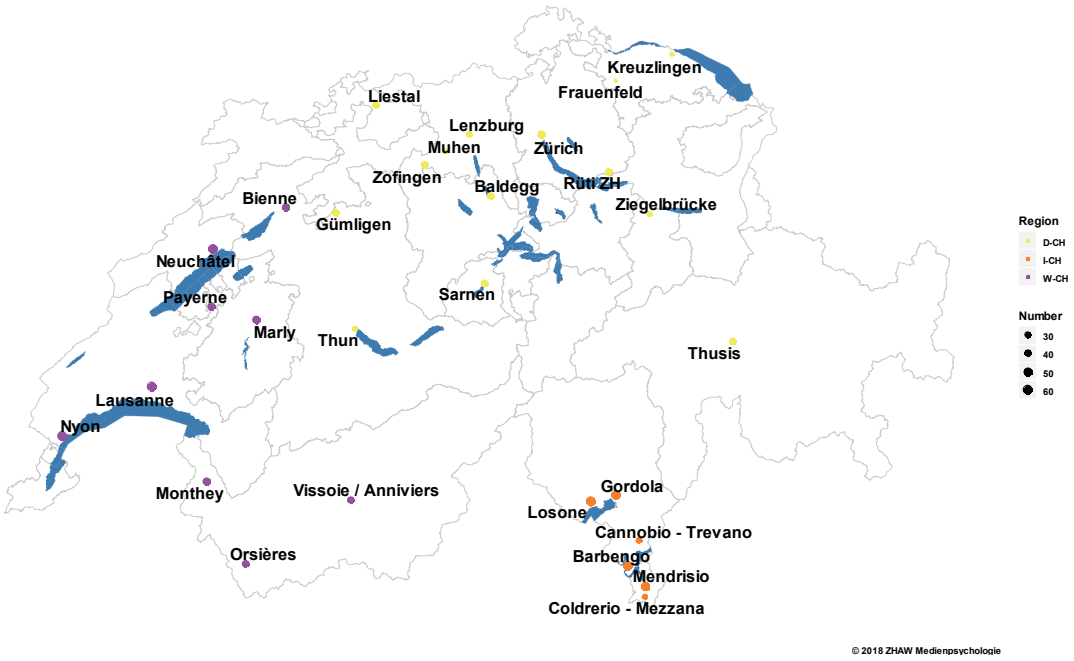

Illustration 2: Geographic distribution of the sample (location of school)

The residential location usually differed from the location of the school for secondary II pupils. These schools often have a wide geographical catchment area. Consequently, Illustration 3 shows the city-rural distribution of the residential locations of those surveyed.

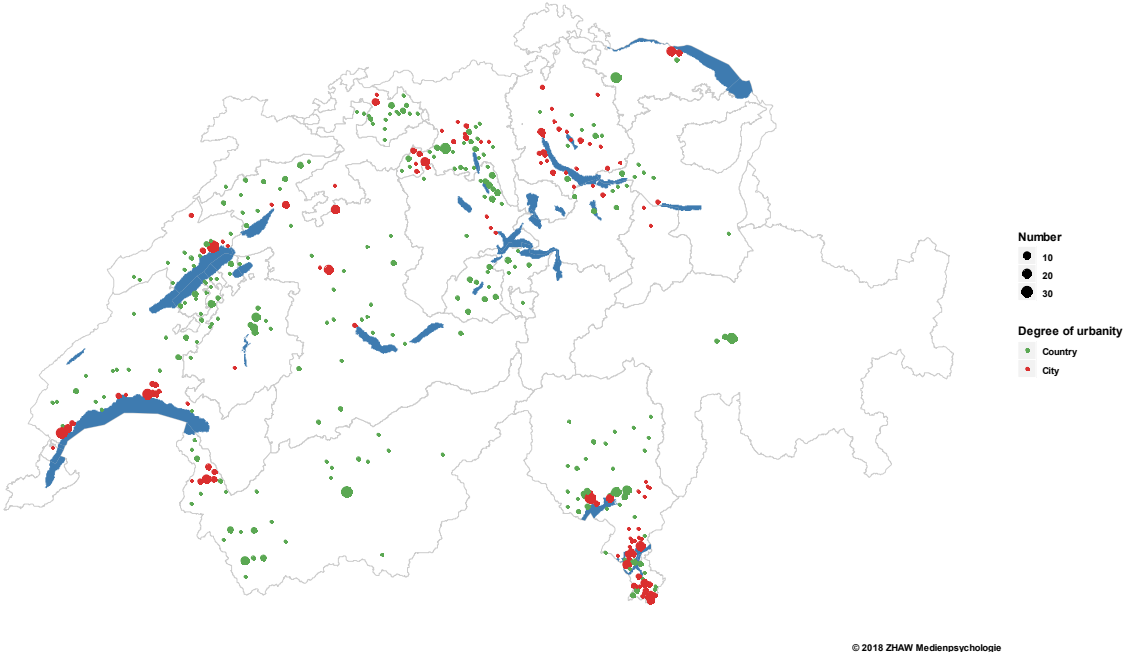

Illustration 3: Geographic distribution of the sample (residential location of those surveyed)

Reference was made to the definition of "Raum mit städtischem Charakter 2012" (Area with urban character 2012) of the Federal Statistical Office (Goebel & Kohler, 2014) for the subdivision into "city/agglomeration" and "rural". The classification was adjusted compared to 2016: For the analyses, communities were only defined as "city/agglomeration" that met the criteria of a **core agglomeration community** (urban core, main core or ancillary core zone). Together, these communities form the core of an agglomeration. So-called EBL values are crucial for the classification (by the Federal Statistical

Office, 2018a). "EBL is an acronym for the total number of inhabitants (EW, constant residential population), employees (BESCH) and equivalents for overnight stays in hotels and health spas. EBL is used as an absolute factor just like density factor" (Goebel & Kohler, 2014, p. 8).
By using this classification, "rural" communities can involve communities that are within the influence zone of urban cores and consequently do not correspond to the cliché of an isolated community in the countryside. Against the background of urban spread, highly developed road and rail networks and urbanisation in Switzerland, this classification still seems to us to be the best way of categorising urban and rural areas. Using this classification, 424 communities are regarded as "city/agglomeration" and 1'798 communities as "rural".

2.4 Questionnaire

The questionnaire is a revised and updated version of the questionnaire from 2016. Questions from the 2017 JIM Study (Feierabend, Plankenhorn & Rathgeb, 2017) were taken into consideration during the revision. In addition, technical innovations were added: among other things, the question about a gaming flat-rate subscription and use of a fitness bracelet or step counter are new items. This year, similar to the survey in 2012, we also asked about the favourite musicians or bands and now about favourite series, whether on TV, the Internet (e.g. *Netflix*) or elsewhere.
Moreover, individual question blocks were redesigned. This was above all the case in the social network area. It is now possible to estimate the proportion of memberships of various social networks more precisely. The questions about activities within social networks were originally strongly oriented to *Facebook* functions. Due to the declining popularity of *Facebook* among young people and new functions in *Instagram* or *Snapchat* (e.g. stories), we have completely redesigned this question block. The question about activities involving entertainment and information on the Internet was also redesigned. While these blocks had previously been separated, they were now surveyed together, which for the first time permitted a direct comparison.
Information on demographic variables was also collected in addition to media equipment and media use.

Since the JAMES questionnaire is heavily oriented to the questionnaire of the German JIM Study and the latter enjoys copyright protection, the questions from the JAMES questionnaire are also not publicly accessible.

2.5 Weighting / post-stratification

The sample is a stratified cluster sample. The individual school classes were treated as a cluster in this regard and are the primary sampling units (PSU). Strictly speaking, the randomly drawn locations constituted the PSU and the school classes the secondary sampling units (SSU). However, the single level cluster design with the classes as PSU was given priority, since in some locations only one class was surveyed. In the two-level design, the precondition that at least two SSUs had to exist per PSU was not met. This would have meant that the data of several classes could not have been included in the analysis (Lumley, 2010a, 2010b). A sample of this kind cannot be analysed like a "simple sample", since otherwise incorrect standard errors are evaluated, which can lead to a distortion in significance tests (design effect). Therefore, all of the evaluations were design-based. In the interests of structure equivalence to the total population, the disproportional sample has been weighted directly at the case level and no longer at the class level since 2016. Post-stratification was carried out via the characteristics language region and school level (divided into secondary I and secondary II; indirectly, this also included the age variable). The number of adolescents per class was obtained from the population data of the Federal Statistical Office (2018b) for the "finite population" (see Table 1).

The sample design described in Table 1 served as the basis for all analyses of the data from 2018. Consequently, the values from the German Swiss sample were weighted about 2.4-times more strongly

than the values from the Romandie sample and 16.6-times more strongly than the values from the Ticino sub-sample. The weighting key for 2018 is based on the latest figures of the Federal Statistical Office (2018b). A less detailed key was used in the report of the 2010 academic year (Willemse, Waller & Süss, 2010). A more precise key was applied retrospectively to the data from 2010 for the purpose of time comparisons in this report. Minimal differences to the figures published in the 2010 report can occur in comparisons with 2010 in this report for this reason.

Table 1: Multi-level sample design 2018

Class **Language region**	**German-speaking Switzerland**		**French-speaking Switzerland / Romandie**		**Italian Switzerland / Ticino**		**Total**
Sub-class school level	Secondary I	Secondary II	Secondary I	Secondary II	Secondary I	Secondary II	
Number of cases in the sample	221	235	224	209	178	107	**1'174**
Number of adolescents in the population (finite population correction, fpc)	220'519	234'267	92'055	101'124	13'250	14'221	**675'436**

2.6 Statistical analysis

In a first step, the data collected was evaluated descriptively and where useful, presented as a diagram. Calculations of averages, variances and standard errors were performed with the Horvitz-Thompson Estimator (Lumley, 2010a). Medians and their confidence intervals were estimated according to the method of Shah and Vaish (2006). To guarantee comparability with the German JIM Study (Feierabend, Plankenhorn & Rathgeb, 2017), in many cases only the answer options "daily" and "several times a week" were presented in summary as diagrams. The terms "**frequently**" and "**regularly**" were used synonymously for the combination of these two answer options in the interests of better legibility.

Moreover, a series of statistical a posteriori comparisons were carried out. Since these group comparisons were not based on previously posited hypotheses, they should be interpreted with caution. Consequently, the procedure is of an explorative character. Alpha error accumulation in statistical multiple comparisons was taken into account; the alpha error level was adjusted. You can find more information on this in the report on the JAMES Study of 2010 (Willemse et al., 2010). Unpaired two-group comparisons were carried out with the design-based Wilcoxon rank sum test. The design-based Wald test was used for multi-group comparisons. No post-hoc tests were carried out. In multi-group comparisons, a significant test result means that at least one difference exists between the groups. Both the Wilcoxon rank sum test as well as the Wald test are robust and do not need any normally distributed data. If no differences are mentioned in the findings chapters between subgroups, no significant differences could be identified. The percentage information in brackets in the description of significant differences between subgroups normally refers to the frequency of "at least several times a week".

Since 2016, **in the event of statistically significant differences,** the **effect factors** have been calculated and transferred to the diagrams. This expansion permits readers to distinguish major effects from average, small or marginal ones at a glance in the illustrations. According to Cohen (1988), effect factors are not only central to the power analysis, but instead "… a moment's thought suggests that it is, after all, **what science is all about**" (p. 532). The effect strength was calculated on the basis of the formula for the Wilcoxon rank sum test for Rosenthal (1994):

$$r = \frac{\mathrm{Z}}{\sqrt{n_1 + n_1}}$$

to make allowance for the complex sample design, the sub-sample factors (n_1 and n_2) were corrected in the formula of Rosenthal (1994) with the particular design effect (D_{eff}).

$$r = \frac{Z}{\sqrt{\frac{n_1}{D_{eff_1}} + \frac{n_1}{D_{eff_2}}}}$$

The design effect for its part was calculated as follows:

$$D_{eff} = 1 + (m - 1)p$$

the factor *m* stands for the average number of cases in the clusters (school class), while *p* represents the intraclass correlation between the clusters.

The different versions of the effect factors were identified as follows or determined with the following ***r***-values:

Designation	Symbol	***r*-classification according to Gignac & Szodorai (2016)**
marginal effect	○○○	$r < 0.10$
small effect	●○○	$0.10 \leq r < 0.20$
average effect	●●○	$0.20 \leq r < 0.30$
major effect	●●●	$r \geq 0.30$

The classification of effects is not based on the guidelines postulated by Cohen (1988), but instead on the guidelines of Gignac and Szodorai (2016). The two last-mentioned authors created a systematic quantitative analysis of over 700 social science studies. They compared all published ***r***-values and in this way were able to empirically reinforce the guidelines acquired in this way for the effect factors on the basis of the 25th, 50th and 75th percentile.
When comparing more than two subgroups (e.g. age groups), the effect size with the biggest difference was calculated for both subgroups.

Analysis of open questions
Apart from the (mainly) closed questions, several open questions were also asked (e.g. their favourite leisure activities, favourite musicians/bands, etc.). The adolescents were able to provide a maximum of three pieces of information in this connection. The sequence was irrelevant when it came to counting the names given; all information was treated equally. These were not weighted on the basis of the sample design. Consequently, information from adolescents from Romandie was weighted disproportionately (see Table 1).

2.7 Background information on specific grouping variables

Socio-economic status (SeS)
The survey of the socio-economic status (SeS) was redesigned in 2014 (Willemse, Waller, Genner, Suter, Oppliger, Huber & Süss, 2014). Based on the example of the family affluence scale (FAS) (Currie et al., 2008), a short scale was developed, which was supplemented and underwent further development in the following years. The items used in the 2018 survey refer to the number of computers (incl. laptops and tablets) in the family, the number of cars in the household and the number of holiday trips in the last 12 months. In addition, the survey asked whether those surveyed had a room of their own and how many bathrooms they had at home. The consumption of sweet beverages was included in the determination of the socio-economic status.

School type or formal educational level
Potential differences between the different school types are only analysed within the sub-sample **secondary level I** (junior high school: lowest level; **secondary**: medium level; **secondary I**: highest

level), because only there is information available on three formal educational levels. Moreover, this distinction could not be drawn in Ticino due to the different school system; consequently, in these analyses only data from German-speaking Switzerland and Romandie were included. At the **secondary II level** a distinction could only be drawn between vocational training and secondary II. Information from those vocational pupils who were pursuing an advanced level certificate (vocational advanced level certificate) was unavailable.
Although the terms for the different formal educational levels at secondary I were in part adjusted to secondary A, B and C, the terms junior high school (“Realschule”) and secondary school (“Sek”) continue to be used frequently.

Family background or migration background
Adolescents who stated Switzerland was their country of origin were classified as Swiss, irrespective of whether they also mentioned another country of origin. If they stated another country of origin solely, they were classified as adolescents with a migration background.

3 Most popular leisure activities

As was evident in the penultimate JAMES Study in 2014 (Willemse et al., 2014), the leisure activities, which adolescents most like to engage in, are often also those practised most frequently. Consequently, the favourite activities of adolescents provide an indication of what position media and non-media activities hold in the everyday life of young people. Consequently, analogously to the survey in 2014, the adolescents were also asked about their favourite leisure activities this year. As part of the open questions at the beginning of the questionnaire, the adolescents could write down three of their favourite leisure activities. To be specific, the three favourite activities with friends and their three favourites without friends. The answers were categorised and presented visually with the assistance of word clouds; only the activities with at least 20 mentions (Nm.) were included in the word clouds.

3.1 Most popular leisure activities alone

When it came to the question about adolescents' favourite leisure activities for when they were alone, the use of **audiovisual media** came first (596 Nm.). Among other things, this also included watching *series* (145 Nm.), *films* (131 Nm.), *television* (190 Nm.) and *videos* (70 Nm.), e.g. on *YouTube*. The streaming platform *Netflix* was also mentioned repeatedly (50 Nm.).
Sporting activities were also mentioned very frequently (519 Nm.). In this regard, the category *Sport* (330 Nm.) represented in the word cloud was made up of direct mentions of the term "sport" (175 Nm.) and many individually-mentioned kinds of sport (a total of 155 Nm.). Sports like *football* (72 Nm.), *cycling* (41 Nm.), *jogging* (32 Nm.) or *fitness* (23 Nm.), which were mentioned frequently, are presented separately in the word cloud. *Dancing* (31 Nm.) was also often mentioned. However, since its mention does not necessarily refer to a sporting activity (dancing at a party or in a club could be meant), this activity was not included in the sport category.
Gaming (this includes every form of digital gaming, irrespective of the platform) is also a popular activity (343 Nm.) that adolescents engage in when they are alone, just like *listening to music* (307 Nm.) and *reading* (307 Nm.). The activities *sleeping* (132 Nm.) and *using a mobile phone* (131 Nm.) were mentioned similarly often. Other activities, which many adolescents mentioned were *drawing/painting* (105 Nm.), *relaxing* (80 Nm.), *eating* (79 Nm.), *being outside / enjoying nature* (77 Nm.) and *playing instruments* (72 Nm.). Illustration 4 shows other popular leisure activities pursued when alone.

Reading note for the word clouds: the font size represents the number of mentions. Consequently, the terms shown largest were mentioned most frequently. The position and direction of the words has no significance. The mentions are not weighted on the basis of the sample design.

Illustration 4: Favourite leisure activity when alone

3.2 Most popular leisure activities with friends

The adolescents could state what their favourite leisure time activities with friends were (see Illustration 5). **Sporting activities** (662 Nm.) were mentioned most frequently. Just as before, the category *Sport* (299 Nm.) includes both mentions of the term "Sport" (161 Nm.) as well as individually-mentioned kinds of sport (138 Nm.). Several specific types of sport were once again frequently mentioned. *Football in particular* (196 Nm.) was mentioned very frequently, but also *cycling* (46 Nm.), *basketball* (38 Nm.), *winter sports* (33 Nm.), *floorball/hockey* (28 Nm.) and *skating* (22 Nm.) were mentioned specifically. *Holding conversations* was the second most frequently mentioned overall (273 Nm.). Moreover, joint *gaming* with friends is also popular (252 Nm.). *Shopping* (220 Nm.) and *going for walks* (211 Nm.) are other activities that adolescents enjoy doing together with friends. **Going out** together is also important for the adolescents. Most spoke directly of *going out* (89 Nm.), but the keywords *parties* (73 Nm.) and *bar* (43 Nm.) were also often mentioned. *Cinema*, with 177 mentions, is another popular joint activity Moreover, many adolescents mentioned *going out for a meal with someone* (95 Nm.) as one of their favourite leisure activities. *Going to a restaurant* (47 Nm.) and *grilling together* (32 Nm.) are also popular. Other activities frequently mentioned included *going swimming* (115 Nm.) (was not included in the category *Sport*, since similar to dancing, it does not unmistakeably involve a sporting activity), *going for walks* (105 Nm.), *going into town* (87 Nm.) and *watching films* (75 N.). Watching series together with

friends was only occasionally mentioned. When it came to *gaming together* (75 Nm.), parlour and board games were mentioned, among other things.

Illustration 5: Most popular leisure activities with friends

4 Non-media leisure activity

In order to show the relevance of media use more clearly in the everyday life of the young people, the adolescents were asked about their non-media leisure activities (see Illustration 6). The activities pursued regularly by most adolescents - i.e. daily or several times a week - included meeting friends, playing sport and relaxing and doing nothing. Almost half of all young people take care of a pet and over a quarter of all surveyed play music themselves and regularly spend time with their families. None of the adolescents mentioned going to concerts and the theatre or going to museums as a frequent activity.

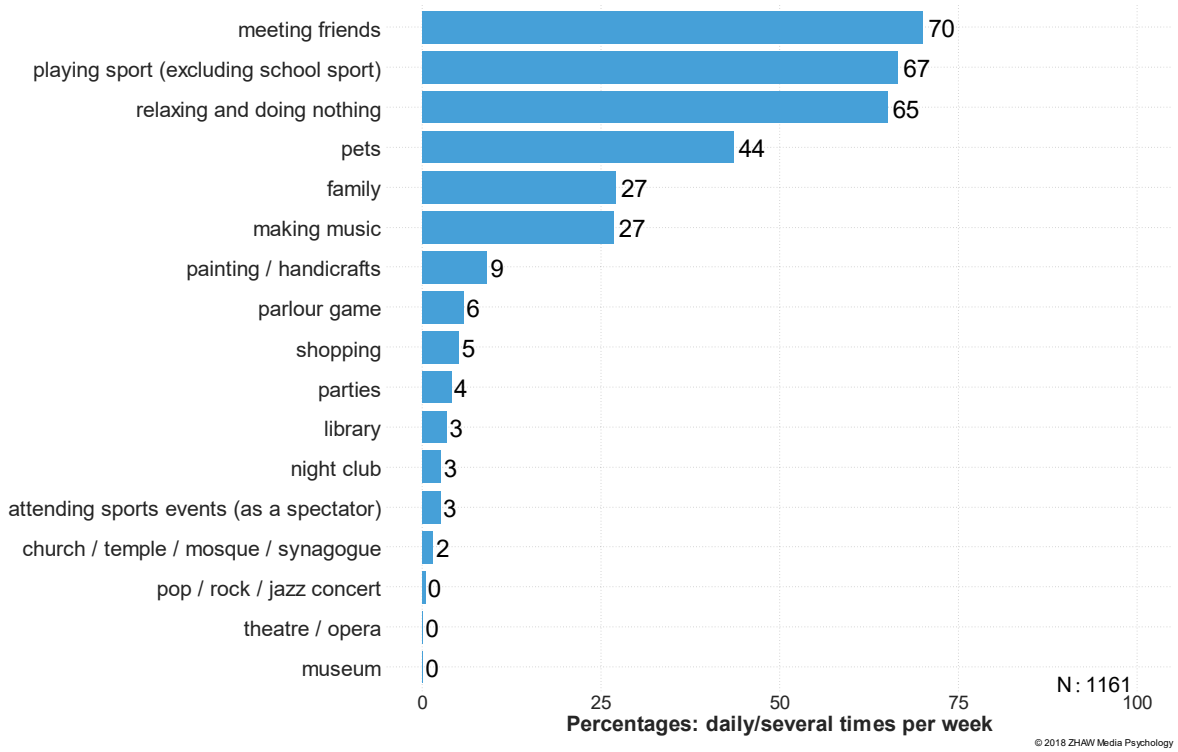

Illustration 6: Non-media leisure time

The **age** of the adolescents plays a role in the various leisure activities. The biggest difference is observable when it comes to making music (medium effect). The older the adolescents are, the less they make music in their free time. While about 36 % of 12-/13-year-olds and 31 % or 30 % of the 14-/15-year-olds and 16-/17-year-olds do this regularly, among the 18-/19-year-olds, it is only 13 % who still make music daily or several times a week. There is a similar picture when it comes to parlour and board games, even if the progression here is not quite as linear (small effect). A little more than a tenth (12 %) of 12-/13-year-olds play games regularly, while among the 14-/15-year-olds it is 5 %, and among the 16-/17-year-olds only 3 %. At 4 %, the age group of 18-/19-year-olds likewise play parlour games far less frequently compared to the youngest group surveyed. There was an inverse correlation regarding going to discos/night clubs (small effect) and parties (marginal effect). These are only mentioned as a frequent activity by adolescents from the age of 16. Among 16-/17-year-olds, 4 % or 7 % go to discos/night clubs and parties regularly. Among 18-/19-year-olds, this is 5 % or 7 %.

With regard to **gender**, there are several differences in non-media leisure activities (see Illustration 7). Girls spend more time with their pets, make music and engage in handicrafts more frequently, whereas boys meet friends more regularly, do more sport and also attend more sport events in their free time than girls. All of these differences involve small effects. With regard to attending parties, a marginal effect is observable, with boys attending parties more frequently than girls.

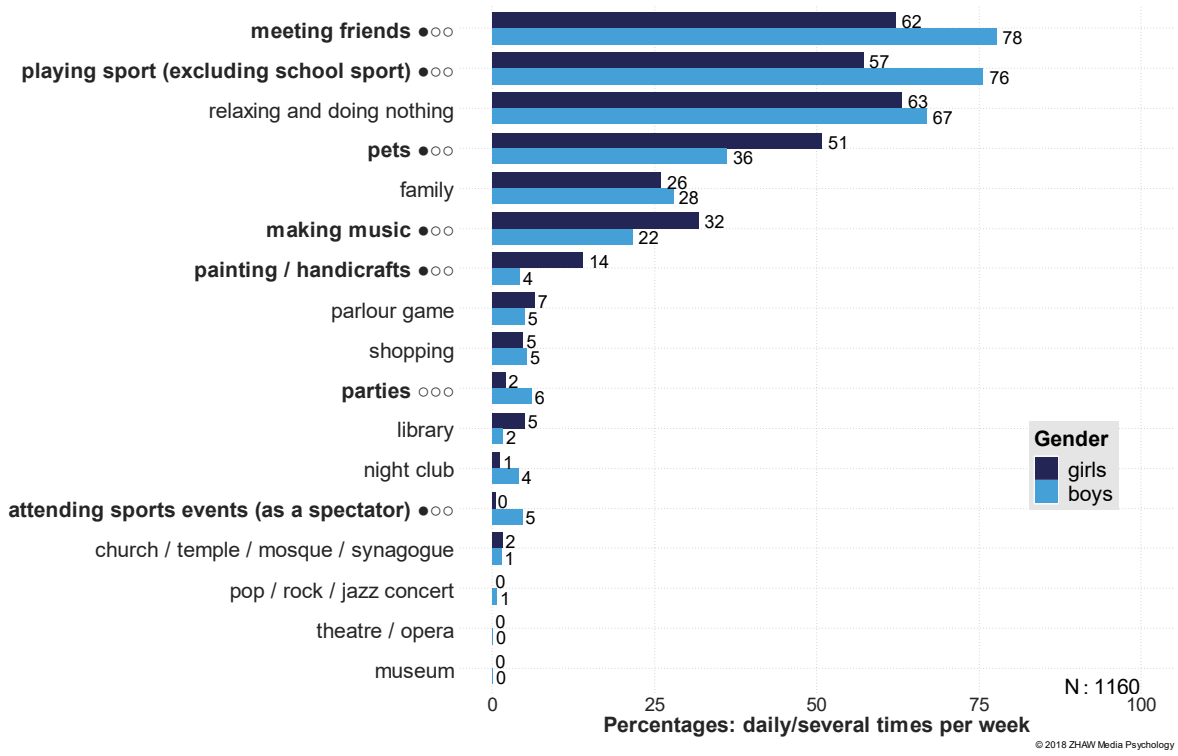

Illustration 7: Non-media leisure time according to gender

Regarding the **family background** of the adolescents, significant correlations are observable in two activities (small effects). At 46 %, adolescents without a migration background spend a lot more time with a pet than adolescents with a migration background (29 %). By contrast, Swiss adolescents do something on a regular basis together with their family less often (25 %) than adolescents with a foreign background (38 %). All other activities are performed by adolescents with and without migration background about equally as often.

Young people from different **regions** spend their free time in part with different activities. The following differences in each case involve small effects. Ticino adolescents spend time more often both with a pet (55 %) as well as with their family (36 %) than those of the same age from the Romandie (48 % or 18 %) and German-speaking Switzerland (41 % or 30 %). Adolescents from the Romandie attend parties most actively (8 %), adolescents from German-speaking Switzerland least often (2 %). At 4 %, relatively few adolescents from Ticino also spend their time regularly at parties. A significant difference is also observable between the three language regions of Switzerland regarding parlour and board games. The effect involved here is marginal. Compared to young people from other regions, Ticino adolescents occupy themselves most frequently with parlour games (10 %), adolescents from German-speaking Switzerland least often (4 %). Among those surveyed from Romandie, this was 8 %.

Pupils from the three **school types** secondary I, secondary and junior high school only differ significantly with regard to the leisure activity "making music yourself". This involves a medium effect. About 47 % of adolescents who attend a secondary I school stated they make music themselves daily or several times a week. At 29 %, those of the same age in secondary school do this far less often. Intermediate school pupils regularly make music least often (16 %).
A significant difference is also evident regarding **socio-economic status (SeS)** (medium effect). Adolescents from households with a high SeS play more sport (74 %) than those of the same age from households with an average (69 %) or low (50 %) SeS. Otherwise, adolescents with different SeS do not differ with regard to their non-media leisure activities.

If one compares the values of the current 2018 survey with that of past years, it is noticeable that, for the first time since the first survey in 2010, significant changes are observable in the non-media activities (see Illustration 8). Compared **over time**, a smaller proportion of adolescents stated they would meet friends daily or several times a week in their free time. By contrast, adolescents spend time more frequently with their families. In both cases, this involves small effects.

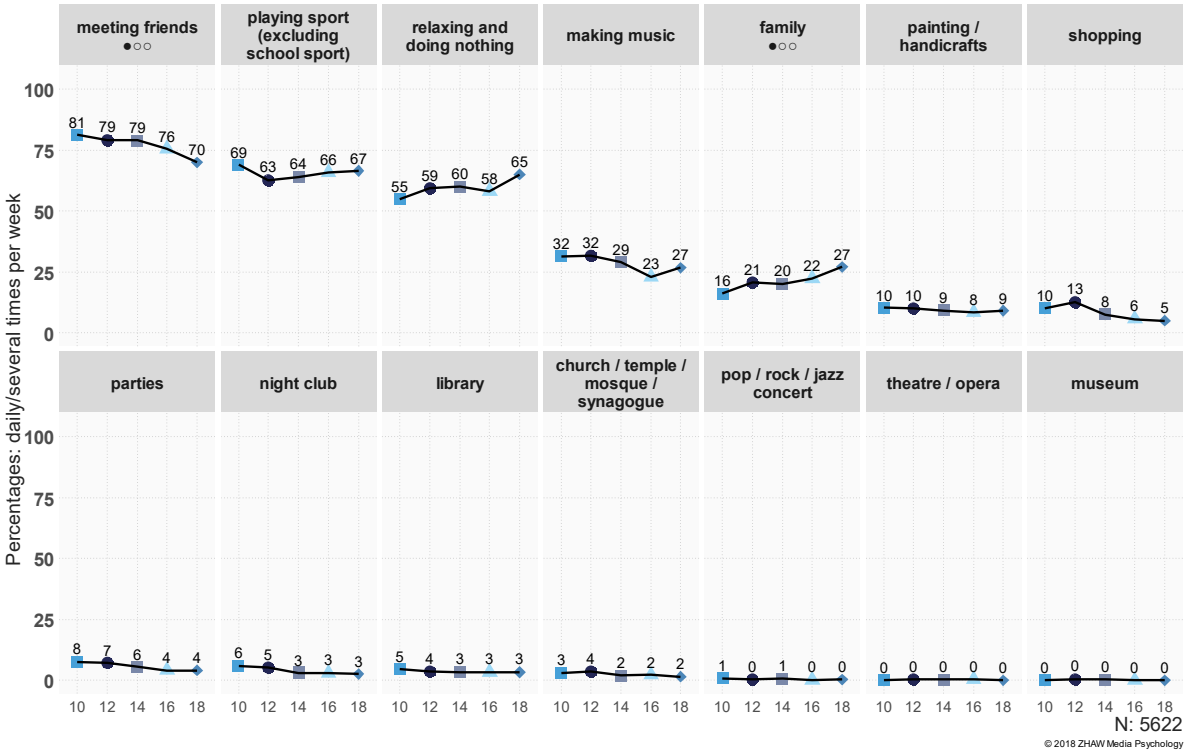

Illustration 8: Non-media leisure time over time 2010-2018

5 Media leisure activity

The following chapter describes what media activities adolescents in Switzerland pursue in their free time. To obtain a very accurate picture of the media activities, the adolescents were asked about media availability in their household, media use and their content preferences.

5.1 Device and subscription availability in households

Device coverage is generally high in households in which adolescents in Switzerland grow up (see Illustration 9). Mobile phones and computers/laptops are universally available and Internet access and a television are available in almost all households. Nine out of ten households have a digital camera and eight out of ten households have a radio, DVD player and tablet. Of the devices mentioned in the survey, only the fitness tracker, record player, e-book reader and smartwatch can be found in fewer than half the families. Fitness trackers, which were included for the first time in this survey round, after all are present in 36 % of the households.

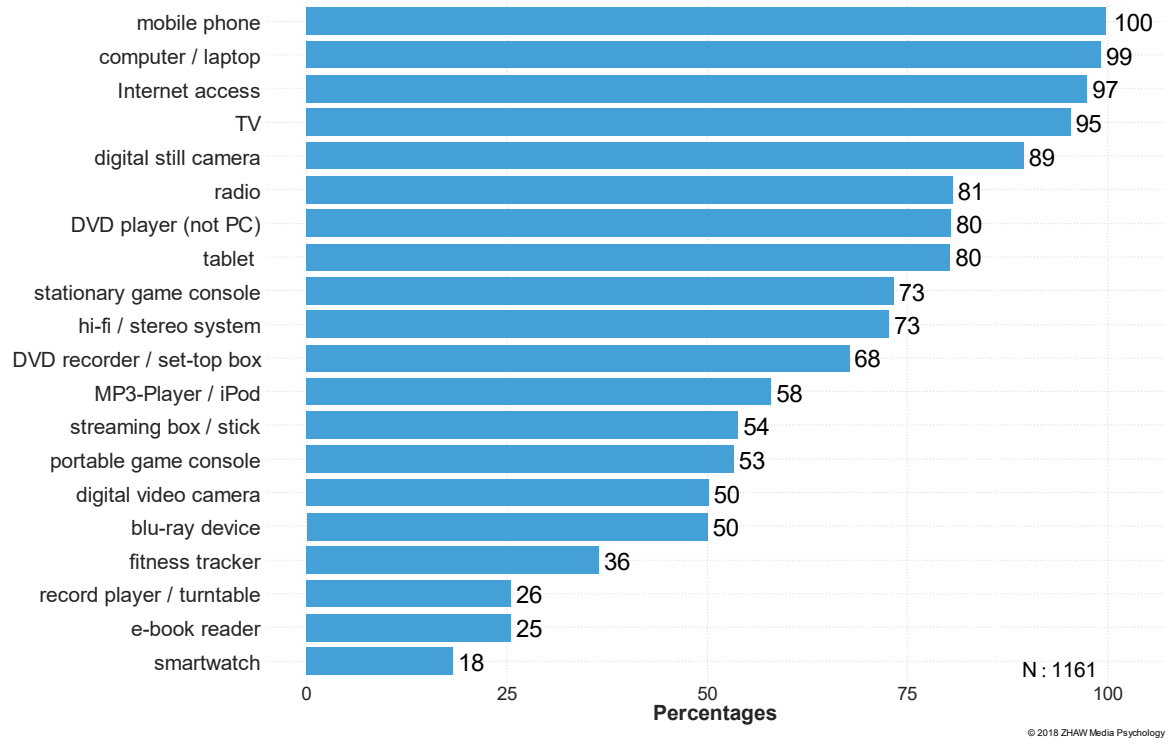

Illustration 9: Device availability in households

There are small differences regarding device availability depending on the **family background**. The digital camera (Switzerland: 91 %, migration background: 79 %), radio (83 % vs. 67 %) and hi-fi / stereo system (76 % vs. 58 %) are present significantly more often in Swiss households than in households with a migration background (in each case small effects).

There are somewhat more pronounced differences in device availability between the three **regions** (see Illustration 10). There is a lower level of Internet access availability in the Romandie than in the rest of Switzerland. Families in the Romandie also have various devices like a radio, hi-fi / stereo system, fitness tracker, record player and e-book reader less often. The clearest difference can be seen for digital video cameras: in the Romandie only 26 % of households have a digital video camera compared to 59 % in German-speaking Switzerland and 68 % in Ticino. To make up for this, families in the

Romandie more frequently possess a portable game console and streaming box than families from the two other regions.

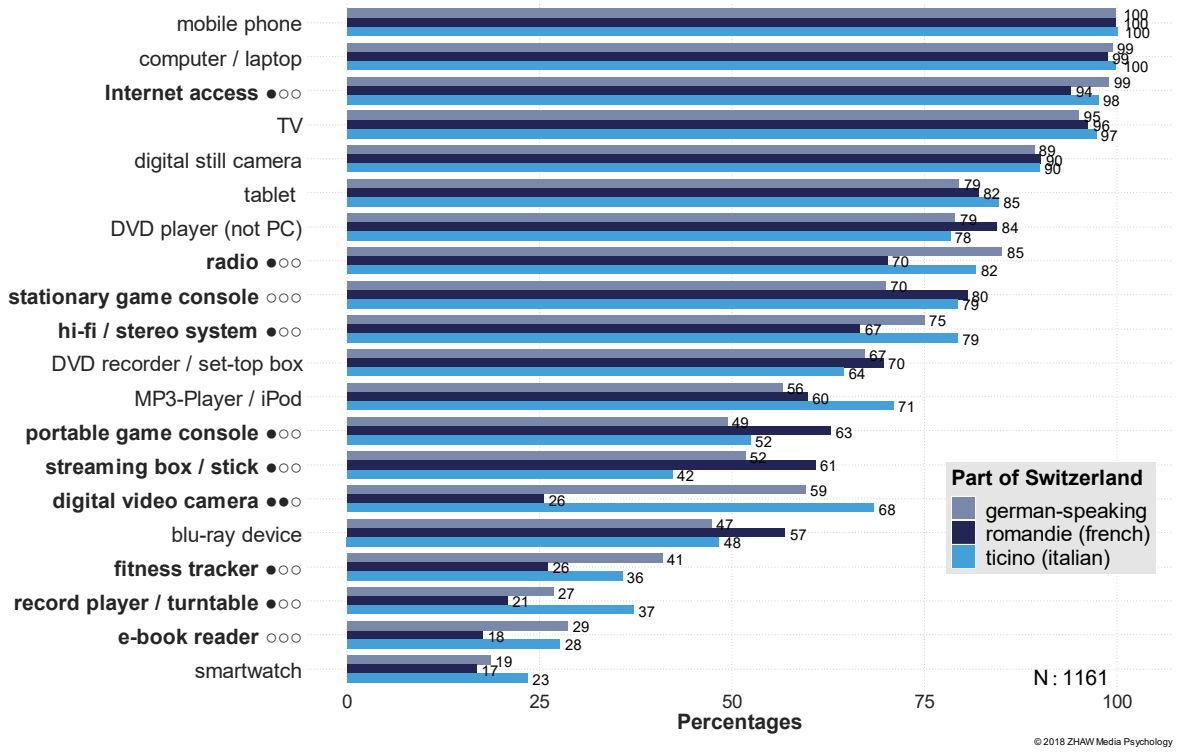

Illustration 10: Device availability in households according to regions

The higher the **socio-economic status (SeS)** of a family, the more devices can be found in the household (see Illustration 11). This correlation is especially clear for tablets, stereo systems and fitness trackers. A higher SeS is also associated with more frequent presence in the household for most of the other devices.

In urban households, tablets (city/agglomeration: 84 %, rural: 78 %) and record players (city/agglomeration: 31 %, rural: 21 %) are more frequently present than in rural households (marginal effects). Otherwise, there are no correlations between availability in the household and **residential location** of the family.

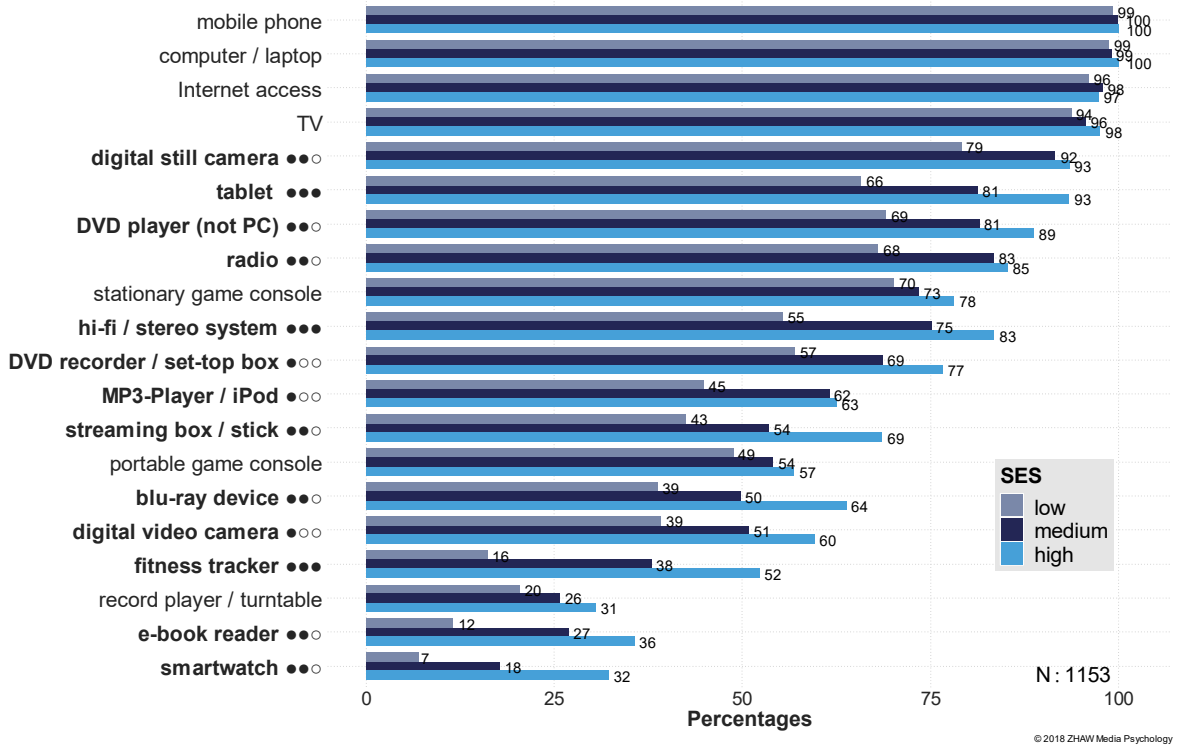

Illustration 11: Device availability in households according to socio-economic status (SeS)

While the proliferation of mobile phones, computers/laptops, Internet access and television have remained at a consistently high level for years, a decline in the availability of several other devices is noticeable **over time** in households (see Illustration 12). The decline in MP3 players/iPods is clearest. Somewhat less drastic, but likewise with a significant downward trend, is the proliferation of digital still and video cameras, DVD players, radios, portable game consoles and record players. The proliferation of tablets has experienced a strong downward trend since its first survey in 2012. This has not continued in the last two years; tablet proliferation has stagnated at a high level of about 80 %.

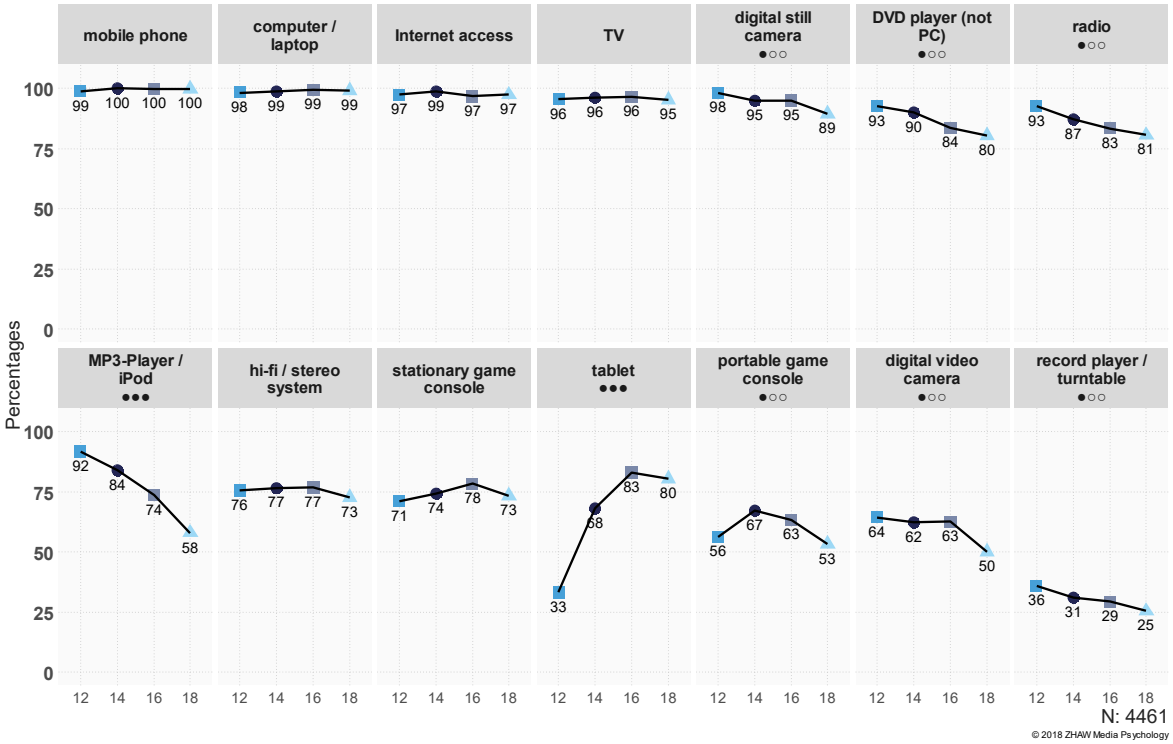

Illustration 12: Device availability in households over time 2012-2018

Apart from device availability, the available **subscriptions** were also surveyed (see Illustration 13). Film- and series-streaming subscriptions were most frequently present in families of the adolescents. Moreover, about half of all households also have a subscription for a daily newspaper or magazine, a music-streaming subscription and subscription television. Every third household has a gaming flat-rate subscription and only about every tenth family has an e-book subscription.

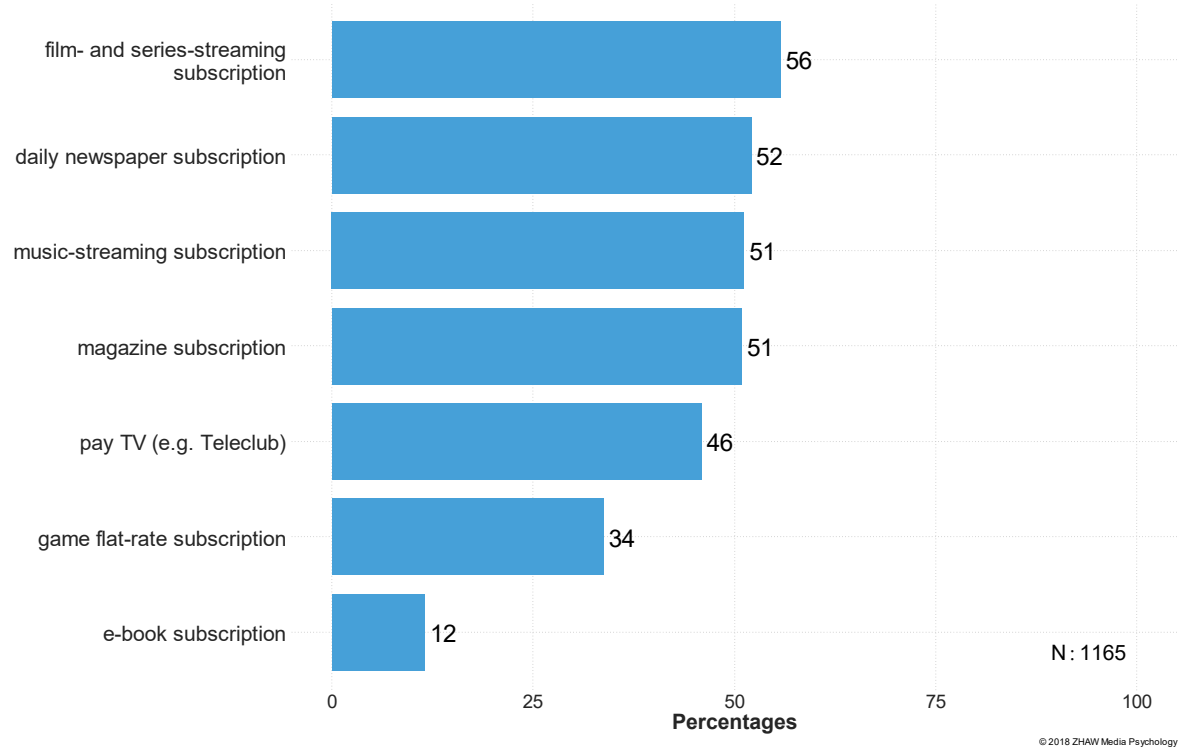

Illustration 13: Subscription availability in households

There is a correlation between the **family background** and the existence of a daily newspaper and magazine subscription. A subscription for a daily newspaper exists in 57 % Swiss households and only in 29 % of households with a migration background (medium effect). There is a magazine subscription in 56 % of Swiss households and 29 % of households with migration background (medium effect).

Depending on the **region**, there are small differences in the presence of various subscriptions. In Ticino, more households have subscription television (64 %) than in the rest of Switzerland (German-speaking Switzerland: 47 %, Romandie: 41 %). At 64 %, subscription television is the most widely distributed subscription type in Ticino: German-speaking Swiss households more frequently have a daily newspaper subscription (German-speaking Switzerland: 57 %, Romandie: 41 %, Ticino: 47 %) and a music-streaming subscription (German-speaking Switzerland: 54 %, Romandie: 45 %, Ticino: 42 %) than households in the two other regions. In the Romandie, e-book subscriptions are somewhat less common (7 %) than in Ticino (12 %) and German-speaking Switzerland (13 %). Despite all the differences, it is merely a small or marginal (e-books) effect.

Higher **socio-economic status (SeS)**, similar to device availability, is associated with a higher availability of various subscriptions (see Illustration 14). This correlation is clearest in the case of magazine subscriptions, but there are clear differences also in the case of daily newspaper, music-streaming and e-book subscriptions, depending on the SeS.

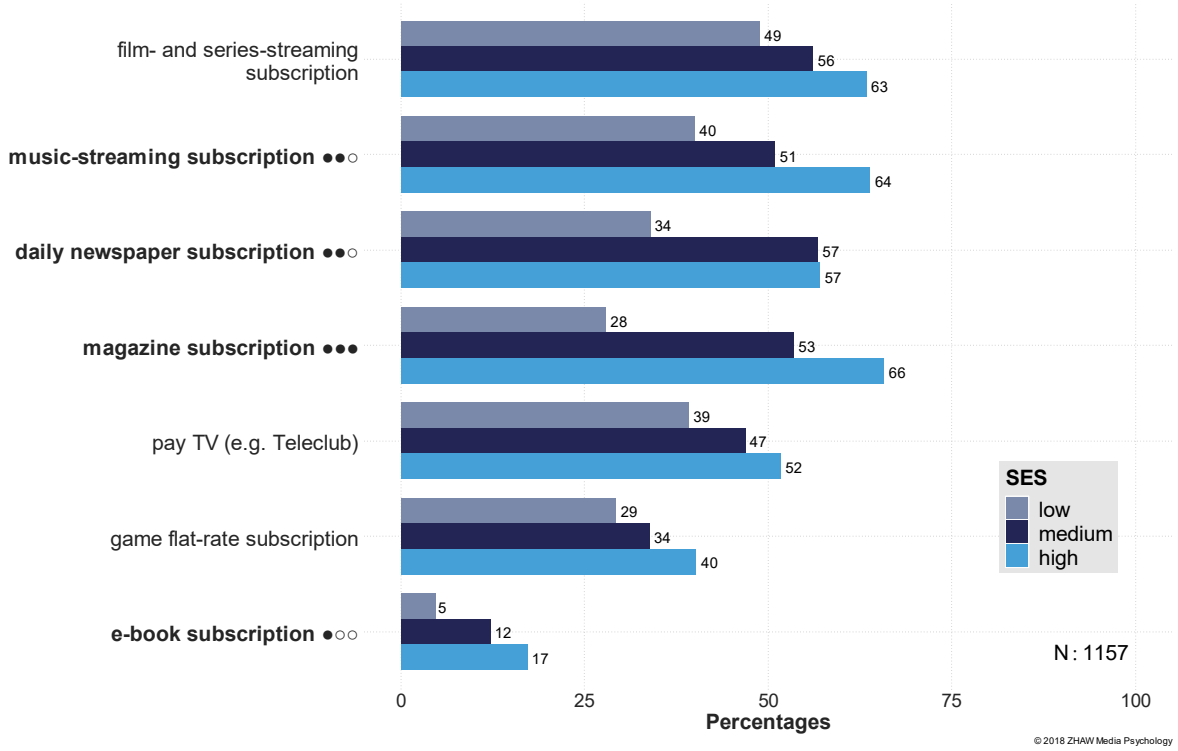

Illustration 14: Subscription availability in households according to socio-economic status (SeS)

A **comparison over time** for subscriptions is only possible via two measurement points, since their possession was only investigated for the second time with the current survey (see Illustration 15). The proliferation of film- and series-streaming subscriptions and music-streaming subscriptions has greatly increased. Whereas in 2016 38 % of surveyed families had a film- and series-streaming subscription, today it is already 56 %. The proliferation of music-streaming subscriptions has grown from 29 % to 51 %. The availability rate has not changed significantly in the last two years for daily newspaper and magazine subscriptions, subscription television and e-book subscriptions.

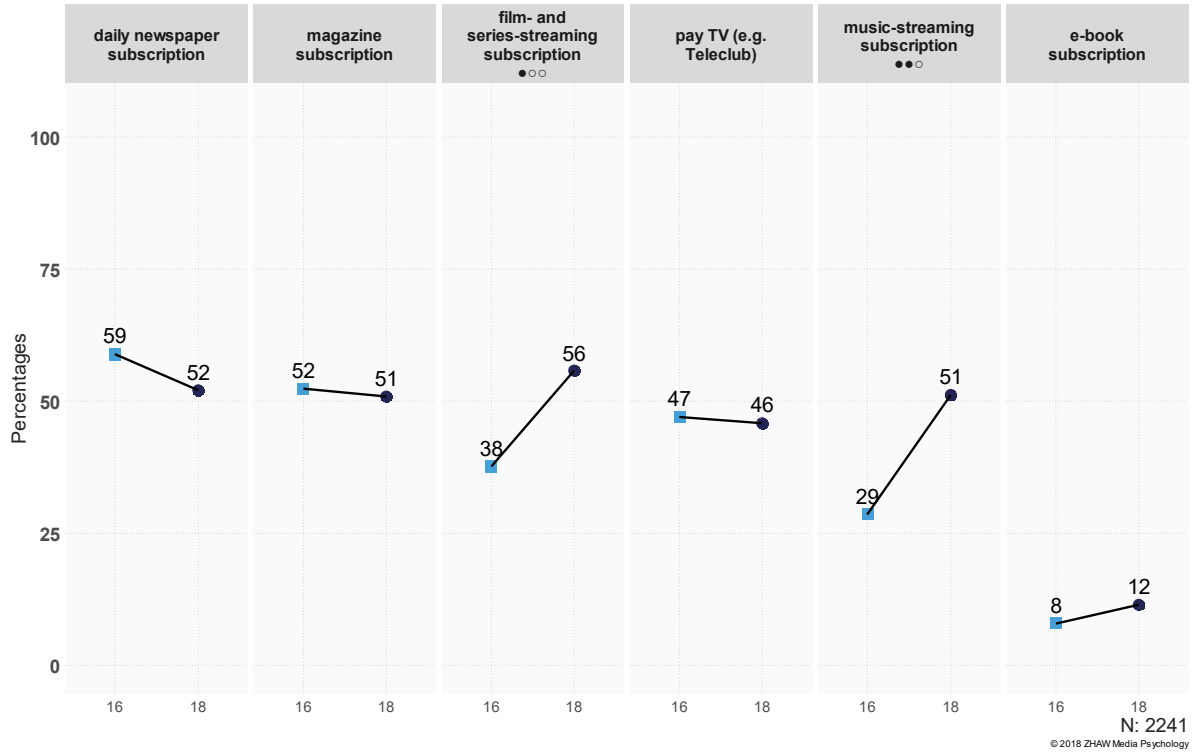

Illustration 15: Subscription availability in households over time 2016-2018

5.2 Device and subscription ownership by adolescents

Apart from media availability in households, the personal media ownership by adolescents was surveyed (see Illustration 16). Evaluations showed that almost all adolescents had their own mobile phone and a large majority had their own computer or laptop. Adolescents owned all other devices far less often.

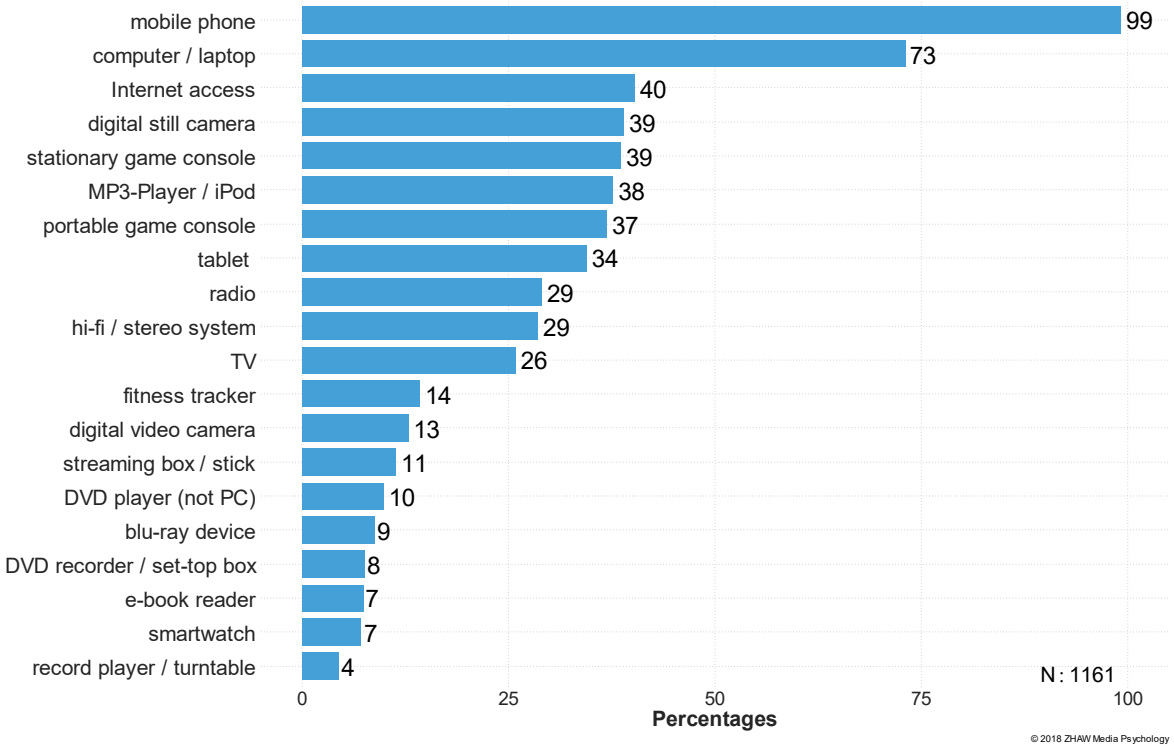

Illustration 16: Device ownership by adolescents

On the one hand, a difference can be identified between the various **age groups** for mobile phone ownership. The 12-/13-year-olds own a mobile phone somewhat less often (97 %) than the older adolescents (14-/15-year-olds: 99 %, 16-/17-year-olds: 99 %, 18-/19-year-olds: 100 %, marginal effect). On the other hand, there is a clear age effect for computer or laptop ownership. Almost half (48 %) of 12-/13-year-olds have their own computer or laptop; among 14-/15-year-olds, this is already 65 %, while 85 % of 16-/17-year-olds and 18-/19-year-olds have their own device (major effect).

Differences are observable regarding the ownership of various devices between **genders** (see Illustration 17). Boys in general have more devices than girls. This correlation is especially clear in the case of stationary game consoles and televisions. But a number of other devices, such as hi-fi / stereo systems, DVD players and Internet access are also more frequently owned by boys. Girls have their own digital cameras and an e-book reader somewhat more often.

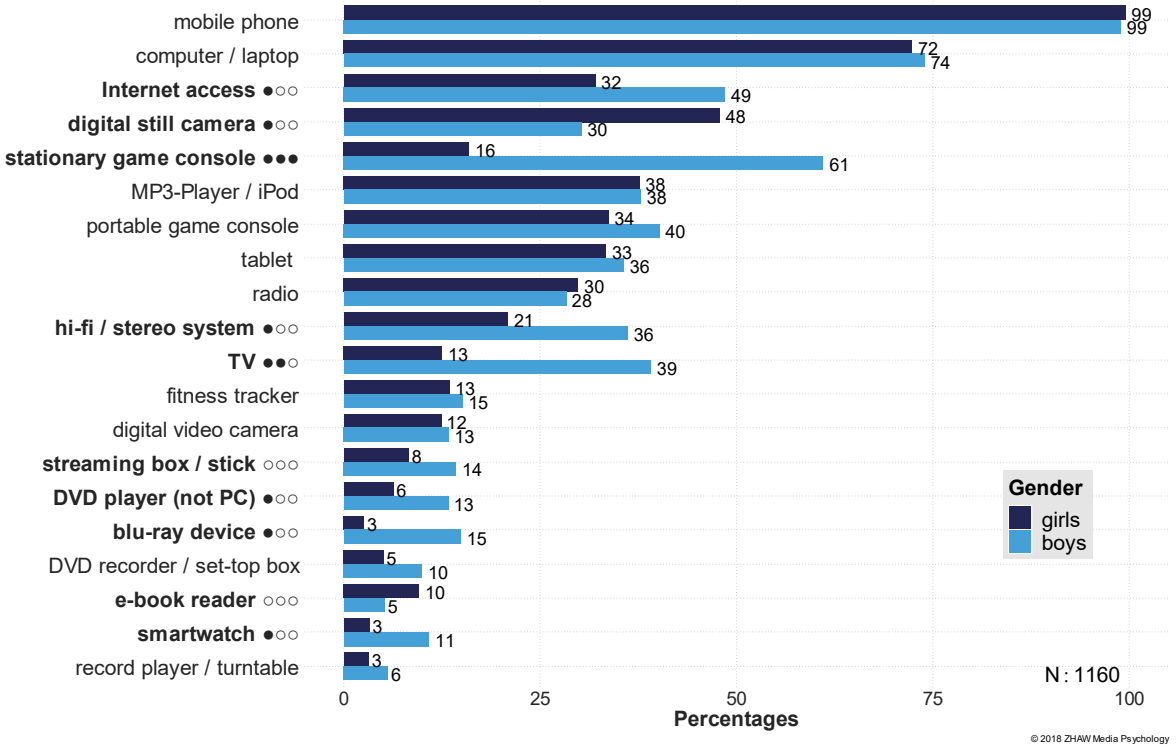

Illustration 17: Device ownership by adolescents according to gender

The **family background** of the adolescents played a role regarding the ownership of four devices (in each case a small effect). Adolescents from families with a migration background have their own tablet (47 %) and their own television (38 %) more often than those of the same age from Swiss families (tablet: 33 %, television: 24 %). By contrast, adolescents with a Swiss family background more frequently have their own hi-fi / stereo system (31 %) and own radio (31 %) than adolescents with a migration background (hi-fi / stereo system: 18 %, radio: 14 %).

There are also minor differences in device ownership between the three **regions**, presented in Illustration 18. The proportion of adolescents who have their own Internet access, a radio and fitness tracker is higher in German-speaking Switzerland than in the Romandie and Ticino. Adolescents from the Romandie have a portable game console more frequently than adolescents from the two other regions, but have a digital camera less often.

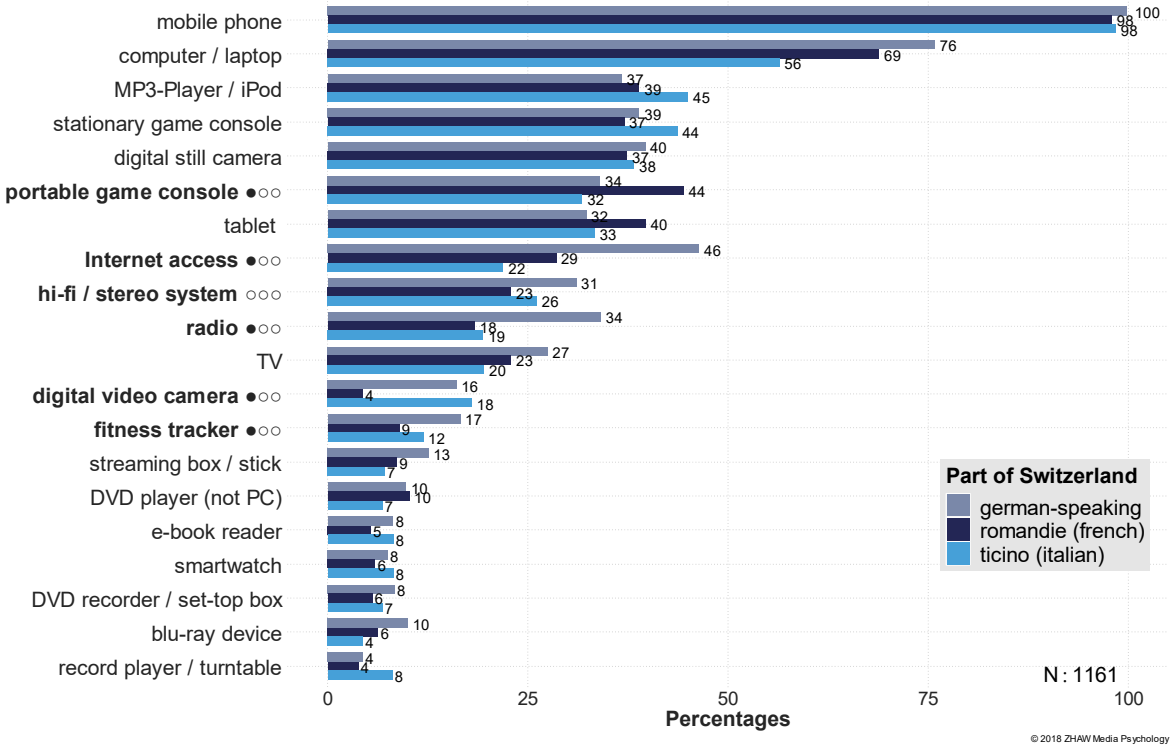

Illustration 18: Device ownership according to regions

The lower the **formal educational level,** the more frequently adolescents have a stationary game console (junior high school: 59 %, secondary: 42 %, secondary I: 21 %) and a television (junior high school: 41 %, secondary: 21 %, secondary I: 6 %). These involve medium effects. This correlation is also evident, but somewhat less clearly (in each case small effects), for Blu-ray devices (junior high school: 15 %, secondary: 7 %, secondary I: 2 %) and a DVD recorder/set-top box (junior high school: 11 %, secondary: 8 %, secondary I: 2 %). The opposite is the case for radios: adolescents in secondary I schools have a radio more often (37 %) than adolescents in secondary (29 %) and junior high school (17 %) (small effects).

Similar to the equipment rate of households with a higher **socio-economic status (SeS)**, the rate of ownership also increases for other devices (in each case small effects). The higher the SeS, the more likely it is for adolescents to own a digital camera (high: 51 %, medium: 37 %, low: 32 %), a radio (high: 32 %, medium: 31 %, low: 18 %), a fitness tracker (high: 23 %, medium: 13 %, low: 9 %) and a streaming box (high: 19 %, medium: 10 %, low: 9 %). The proportion of adolescents who have an MP3 player/iPod is highest in families with a medium SeS (41 %), somewhat lower in families with a high SeS (37 %) and lowest in families with a low SeS (29 %).

For the **residential location**, there is only a significant correlation for the ownership of a DVD recorder (marginal effect): adolescents from rural regions possess a DVD recorder more frequently (9 %) than adolescents from urban regions (5 %).

Over **time**, the downward-trending proliferation of MP3 players/iPods among adolescents is especially striking (see Illustration 19). The proportion of adolescents who have an MP3 player or iPod has also dropped markedly again in the last two years. Moreover, it is increasingly unusual for adolescents to have a digital camera, a portable game console, a radio and a DVD player. The proportion of adolescents who have their own tablet has not increased further since 2016. Similar to the availability in households, there has been a slight decline here, but not a statistically significant one. Compared to 2012 and 2014, fewer adolescents said they had their own Internet access.

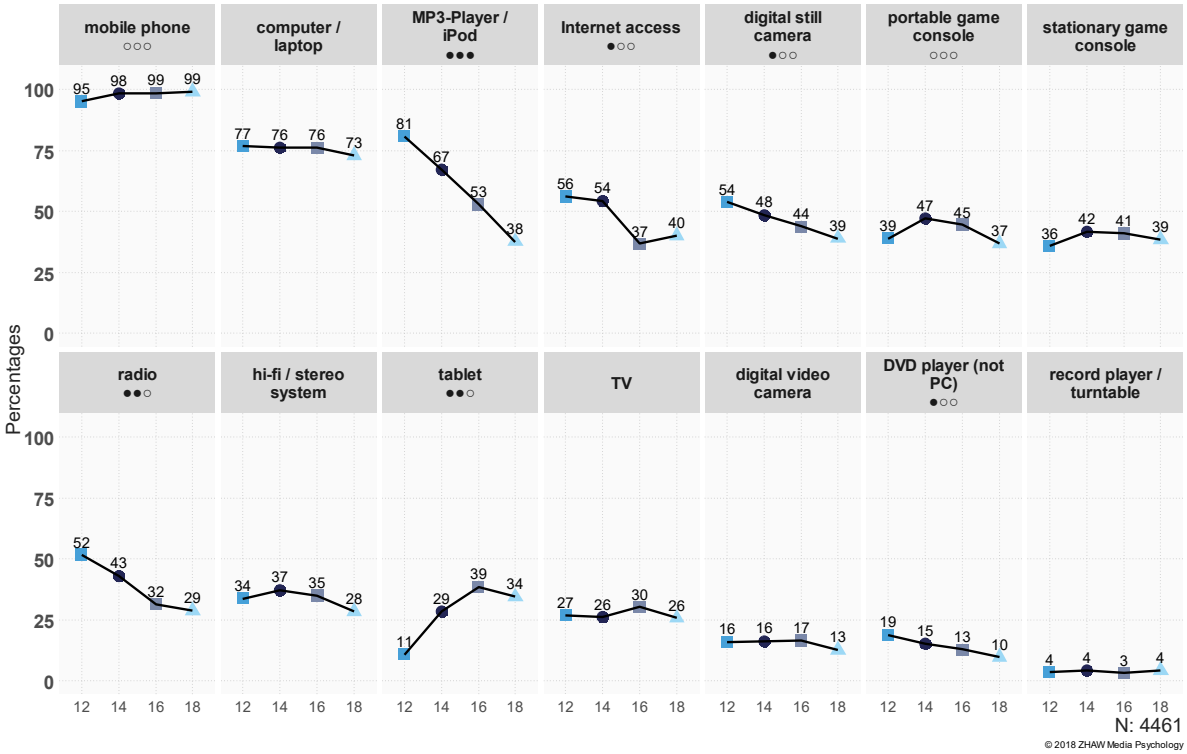

Illustration 19: Device ownership by adolescents over time 2012-2018

Apart from their personal device ownership, the adolescents were also asked about their **own subscriptions** (see Illustration 20). A third of all those surveyed had their own music-streaming and film- or series-streaming subscription and almost every fourth adolescent had their own game flat-rate subscription. Possession of a magazine subscription and subscription television is stated somewhat less often and only a small minority have a daily newspaper or e-book subscription.

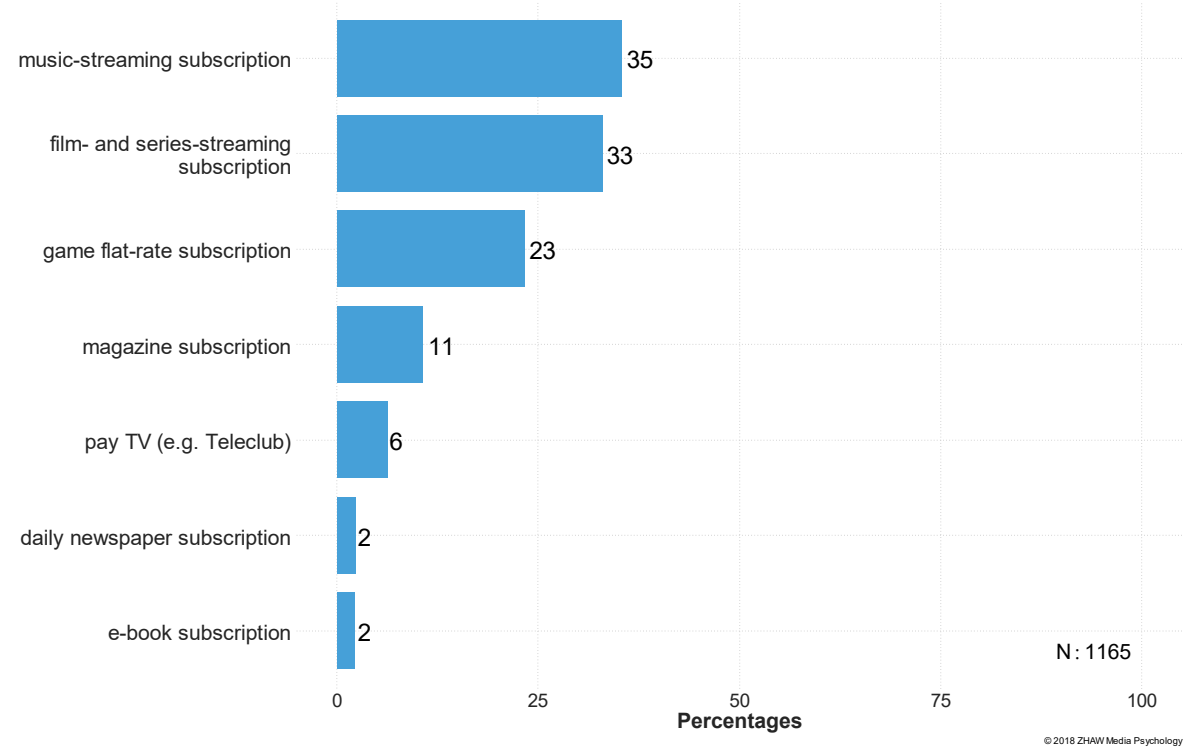

Illustration 20: Subscription ownership by adolescents

The various **age groups** differ only with regard to the ownership of a magazine subscription (small effect). 12-/13-year-olds have a magazine subscription more frequently (22 %) than older adolescents (14-/15-year-olds: 9 %, 16-/17-year-olds: 6 %, 18-/19-year-olds: 9 %).

There is a very clear **gender difference** for game flat-rate subscriptions: whereas at 41 %, almost half of all boys have such a subscription, among girls this is only 5 % (major effect). Boys also have subscription television more often (10 %) than girls (2 %, small effect). There are no gender differences for the other subscriptions.

Differences with a small effect exist between adolescents from German-speaking Switzerland and adolescents from the two other **regions.** German-speaking adolescents possess a music-streaming subscription more frequently (38 %) than those of the same age from the Romandie (29 %) Ticino (27 %, small effect). By contrast, adolescents from German-speaking Switzerland have a daily newspaper subscription less often (1 %) than adolescents from the rest of Switzerland (Romandie: 4 %, Ticino: 4 %, marginal effect).

The **school type** only plays a significant role with regard to the frequency of game flat-rate subscriptions (small effect). The lower the formal educational level of the adolescents, the more frequently they possess such a subscription (junior high school: 41 %, secondary: 24, secondary I: 14 %).

A correlation is evident between the **socio-economic status (SeS)** and the possession of a magazine subscription (small effect). The higher the SeS, the greater the proportion of adolescents who have a magazine subscription (high: 17 %, medium: 10 %, low: 5 %).

Compared **over time**, there has been a great increase in music- and film- and series-streaming subscription availability in households. The proliferation of these two subscription types has more than doubled in the last two years among adolescents (in each case medium effects): the proportion of adolescents who have such a subscription has increased for the music-streaming subscription from 14 % (2016) to 35 % (2018) and for the film- and series-streaming subscription from 15 % (2016) to 33 % (2018). There have been no significant changes in the other subscriptions over the last two years.

5.3 Media leisure activities

The availability in households and personal ownership of such devices and subscriptions admittedly do map the potential use opportunities, but leave open how often and in what form adolescents actually make use of these opportunities. In order to clarify this, the adolescents were asked how often they engage in various media activities in their leisure time (see Illustration 21).

The mobile phone is the daily companion of adolescents. 99 % stated they used it daily or several times a week. The Internet is also used by most adolescents daily or several times a week. The great majority use social networks at least several times a week, listen to music and watch videos on the Internet. Usage frequencies vary more significantly when it comes the other activities. Over two-thirds of all adolescents stated they watched television several times a week and almost half still listened to the radio several times a week and took digital pictures. Newspapers and magazines (online or on paper) are never or only rarely read by half the adolescents and fitness trackers, audio books, e-books and smartwatches are only used rarely, as well.

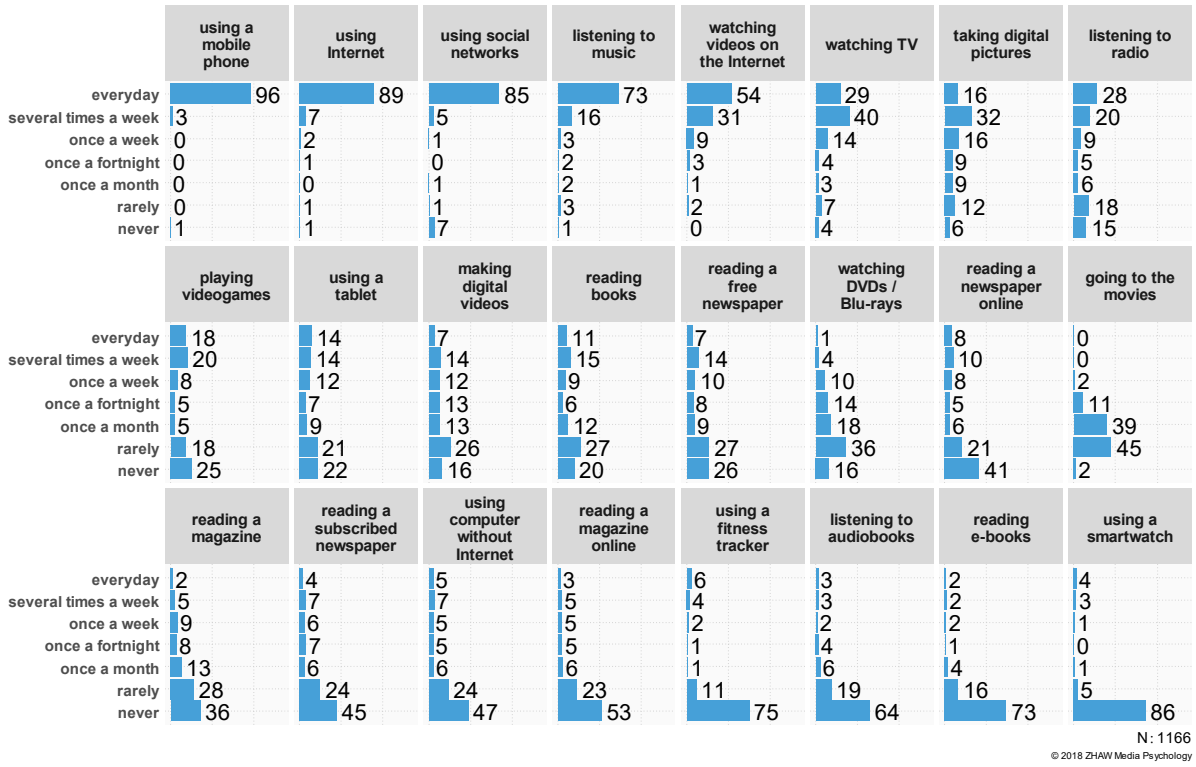

Illustration 21: Media leisure time

There are, in part, clear differences in the usage frequency of various types of media between the **age groups** (see Illustration 22). The group of 12-/13-year-olds uses mobile phones and social networks somewhat less often and listens to less music than older adolescents. Moreover, with increasing age, free newspapers, online daily newspapers and online magazines are read more frequently. By contrast, playing video games, reading books and using tablets are activities that are done a lot less.

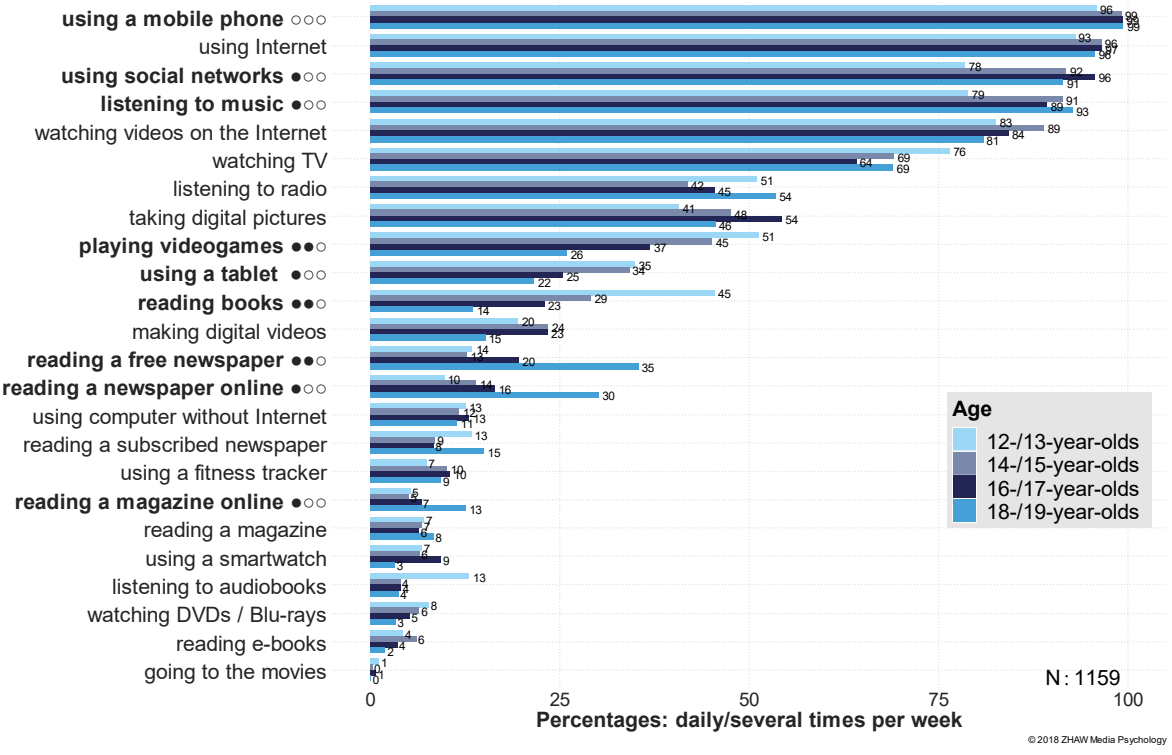

Illustration 22: Media leisure time according to age groups

There is an especially clear **general difference** with regard to the playing of video games (major effect). Two-thirds of boys (66 %) engage in gaming daily or several times a week, whereas among girls this is only 11 %. Boys also watch videos on the Internet more often and use a tablet or smartwatch more often. To make up for this, girls use social networks more regularly and read more books and e-books (see Illustration 23).

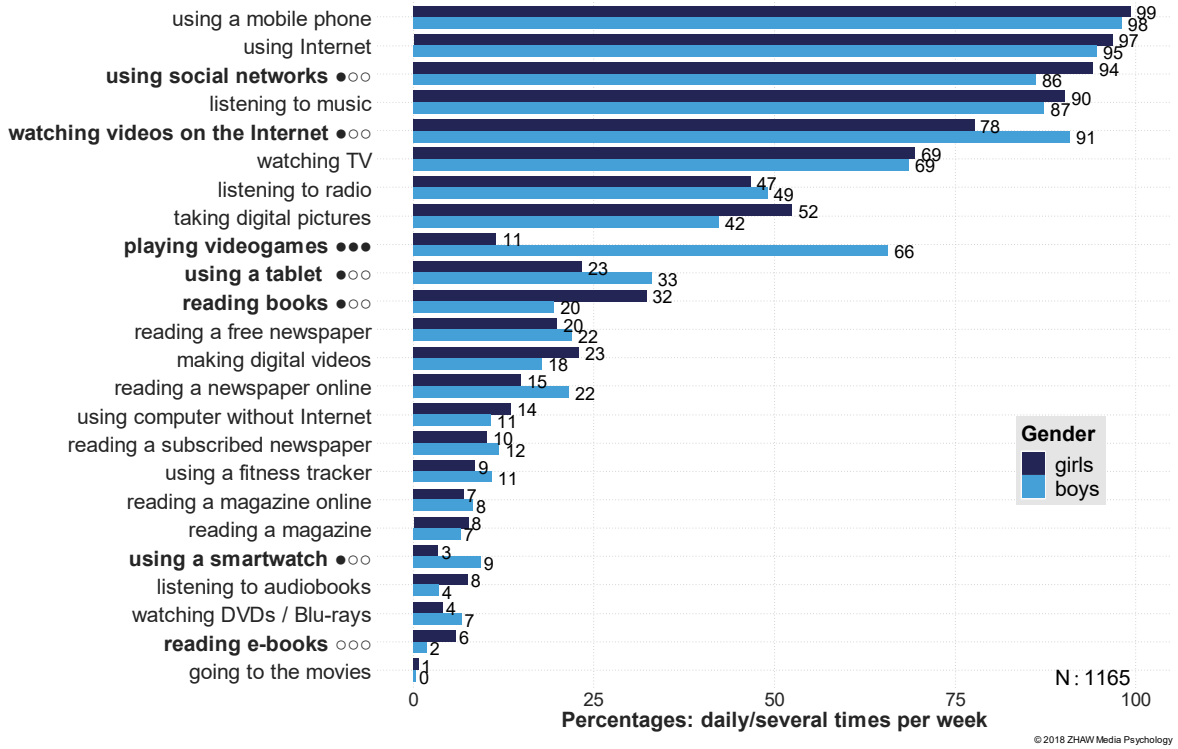

Illustration 23: Media leisure time according to gender

Several types of media are used with differing frequency depending on the **family background** of the adolescents. Adolescents with a migration background listen to more music (94 %, Switzerland: 88 %), watch videos more often on the Internet (91 %, Switzerland: 83 %), play video games more frequently (53 %, Switzerland: 36 %) and make digital videos more often (29 %, Switzerland: 18 %). To make up for this, adolescents without migration background listen to radio more often (51 %, migration background: 30 %), read more free (22 %, migration background: 14 %) and subscribed newspapers (12 %, migration background: 5 %) and use a fitness tracker somewhat more frequently (10 %, migration background: 5 %). All of these differences involve small or marginal effects.

A clear difference was evident between the **regions** in the usage frequency of the radio. Swiss German adolescents listen to the radio (56 %) a lot more than adolescents from Ticino (46 %) and the Romandie (29 %, medium effect). By contrast, Ticino adolescents watch DVDs more often (13 %) than those of the same age from German-speaking Switzerland (5 %) and the Romandie (6 %, small effect). There are also marginal differences in mobile phone use (German-speaking Switzerland 99 %; Romandie 97 %; Ticino 98 %) and in listening to audio books (German-speaking Switzerland: 7 %, Romandie: 2 %, Ticino: 3 %).

The **school type** correlates with the usage frequency of various types of media. The biggest difference can be seen in the reading of books (major effect): the higher the formal educational level, the more regularly the adolescents read books (secondary I: 55 %, secondary: 28 %, junior high school: 18 %). Adolescents from secondary I also read free newspapers (23 %) and subscribed newspapers (17 %) more often than adolescents from other school types (free newspapers secondary: 8 %, junior high school: 5 %, medium effect; subscribed newspapers secondary and junior high school: each 7 %, small effect). By contrast, junior high school pupils play video games more regularly (66 %) than adolescents

from secondary schools (45 %) and secondary I (37 %, small effect). Adolescents from junior high school also watch DVDs more often (13 %) than adolescents from the other two school types (secondary: 5 %, secondary I: 4 %, small effect).

The higher the **socio-economic status (SeS)** of the family is, the more regularly adolescents listen to radio (high: 55 %, medium: 49 %, low: 36 %), use a tablet (high: 36 %, medium: 29 %, low: 19 %), a fitness tracker (high: 14 %, medium: 9 %, low: 4 %) and a smartwatch (high: 13 %, medium: 6 %, low: 3 %). These differences involve small effects. In addition, adolescents from families with a high (12 %) or low SeS (11 %) read magazines online more often than adolescents with a medium SeS (5 %, marginal effect).

The **residential location** only correlates with the usage frequency of two types of media: compared with rural districts, adolescents in urban districts read magazines online more regularly (city/agglomeration: 10 %, rural: 6 %, marginal effect) and e-books (city/agglomeration: 7 %, rural: 2 %, small effect).

Compared **over time**, there has been an especially clear decline in the reading of paper newspapers, whether free or subscribed, in recent years (see Illustration 24). Adolescents are also reading daily newspapers less often online. Magazines are only read less on paper, while the online use has remained constant. Adolescents are also increasingly watching television less regularly. Usage of computers without Internet access has declined since 2012, but has remained constant at 12 % over the last two years. By contrast, Internet usage, taking digital pictures and videos and using mobile phones have increased slightly over the years

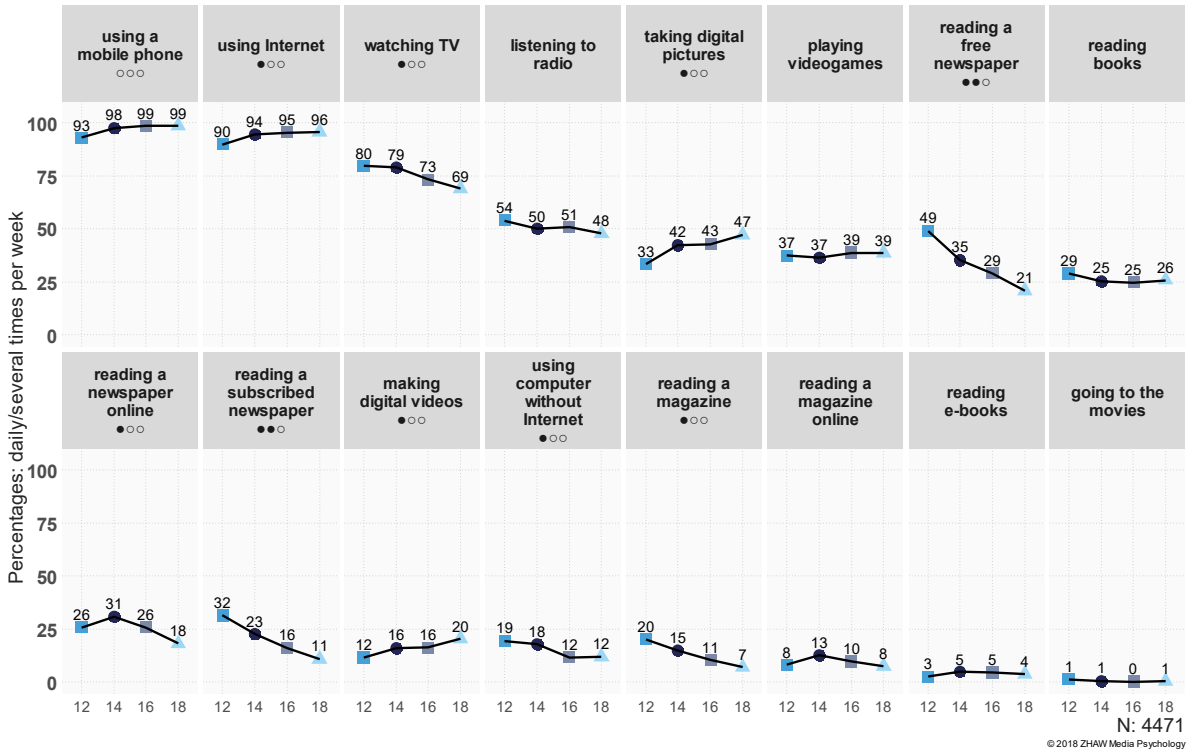

Illustration 24: Media leisure time over time 2010-2018

5.4 Most popular series

In order to learn something about the content preferences of the adolescents in addition to the intensity of the media usage, the adolescents were asked about their favourite series and musicians or bands this year (see chapter 5.5).

In reply to the question about the three **favourite series**, there were 2531 mentions (Nm.). The Spanish series *La casa de papel* was mentioned most frequently with 167 mentions (English: *Money Heist*) (see Illustration 25). It is very popular among adolescents of all four **age groups**; among 12-/13-year-olds it is in second place, among the three older groups in first place. *Money Heist* is a Spanish television crime series, which tells the story of a raid on the Spanish banknote printing house with subsequent hostage taking. The series came out at the end of 2017 on *Netflix* and enjoyed great international recognition. In second place, but with only about half as many mentions (91 Nm.), is *Riverdale* and in third place, with 71 mentions, *Prison Break*. With the exception of the Spanish front runner, there are only US productions among the top 10 of the most popular series mentioned. This applies to all three language regions. What is also striking is that of the ten most popular series, eight can be found in the Swiss *Netflix* database and three of the top 5 are even *Netflix* original productions, (*13 Reasons Why*, *Stranger Things* and *Riverdale*).

Illustration 25: Most popular series

Certain differences are evident between the **language regions**: among adolescents from German-speaking Switzerland and the Romandie, *Money Heist* and *Riverdale* took the first two places. In the Romandie, the Spanish television series is the front runner by far with 94 mentions, (*Riverdale* 38 Nm.), in German-speaking Switzerland the first two are somewhat closer together (*Money Heist* 58 Nm., *Riverdale* 43 Nm.). In third and fourth places in German-speaking Switzerland are *Prison Break* (41 Nm.) and *The Big Bang Theory* (35 Nm.), and in the Romandie *Stranger Things* (34 Nm.) and *Grey's*

Anatomy (29 Nm.). Among adolescents from Ticino, *Breaking Bad* is the most popular series (21 Nm.). This was followed by *Grey's Anatomy* and *Stranger Things*, each with 17 mentions. *Money Heist* took fourth place in Ticino (15 Nm.).

There are also different preferences regarding series between the **genders.** While *Money Heist* is very popular among both girls (79 Nm., second place) and boys (88 Nm., first place), there is no overlapping between the genders under the top 5. Whereas girls prefer youth series, such as *Riverdale* (82 Nm.), *13 Reasons Why* (56 Nm.) or *Pretty Little Liars* (55 Nm.) and the medical series *Grey's Anatomy* (57 Nm.), boys prefer action and crime series, such as *Breaking Bad* (47 Nm.), *Prison Break* (45 Nm.), *Narcos* (44 Nm.) and *The Walking Dead* (42 Nm.).

5.5 Most popular musicians and bands

In reply to questions about **favourite musicians and bands** there were a total of 2852 mentions (Nm.). With 109 mentions, *Ed Sheeran* was mentioned most frequently. But the musical preferences of the adolescents differ very widely between the three language regions. Only *Ed Sheeran, Imagine Dragons* and *AC/DC* are among the ten most popular artists in all three regions. Due to these great differences, a word cloud is presented below for each language region.

Among adolescents from **German-speaking Switzerland** *Ed Sheeran* (54 Nm.) took first place, followed by *Shawn Mendes* (40 Nm.) and *Eminem* (29 Nm., see Illustration 26). The two German hip hop groups *187 Strassenbande* (19 Nm.) and *Capital Bra* (17 Nm.) were in fourth and fifth place. *Lo & Leduc* is the most popular band from Switzerland, with 15 mentions.

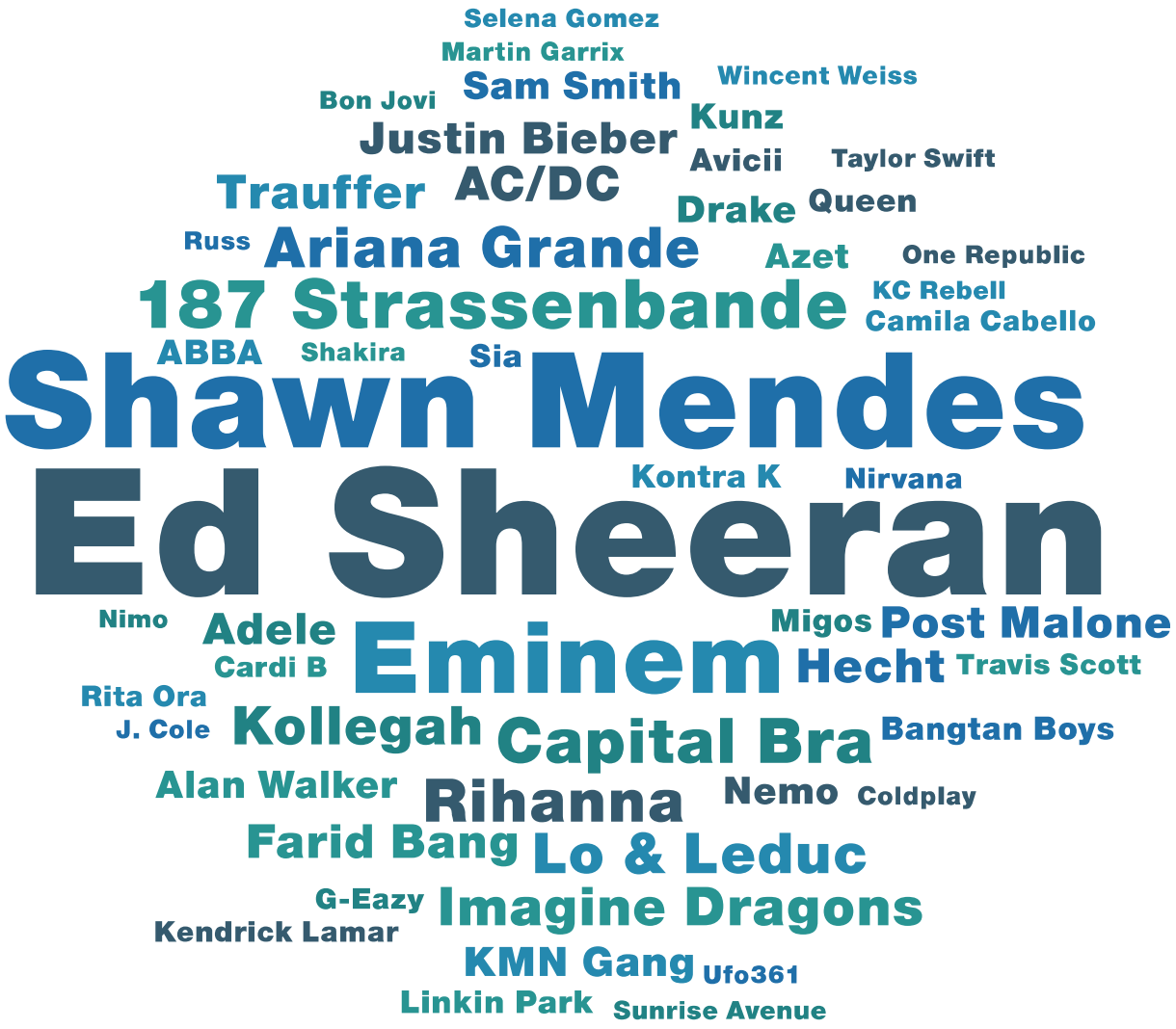

Illustration 26: Most popular musicians and bands in German-speaking Switzerland

Among adolescents from the **Romandie** (see Illustration 27) *Imagine Dragons* are the most popular (21 N.). *Ed Sheeran* and the French rapper *Bigflo et Oli* are in second place with 19 mentions each. Two French-speaking musicians, *Damso* (17 Nm.) and *Dadju* (16 Nm.) took third and fourth places.

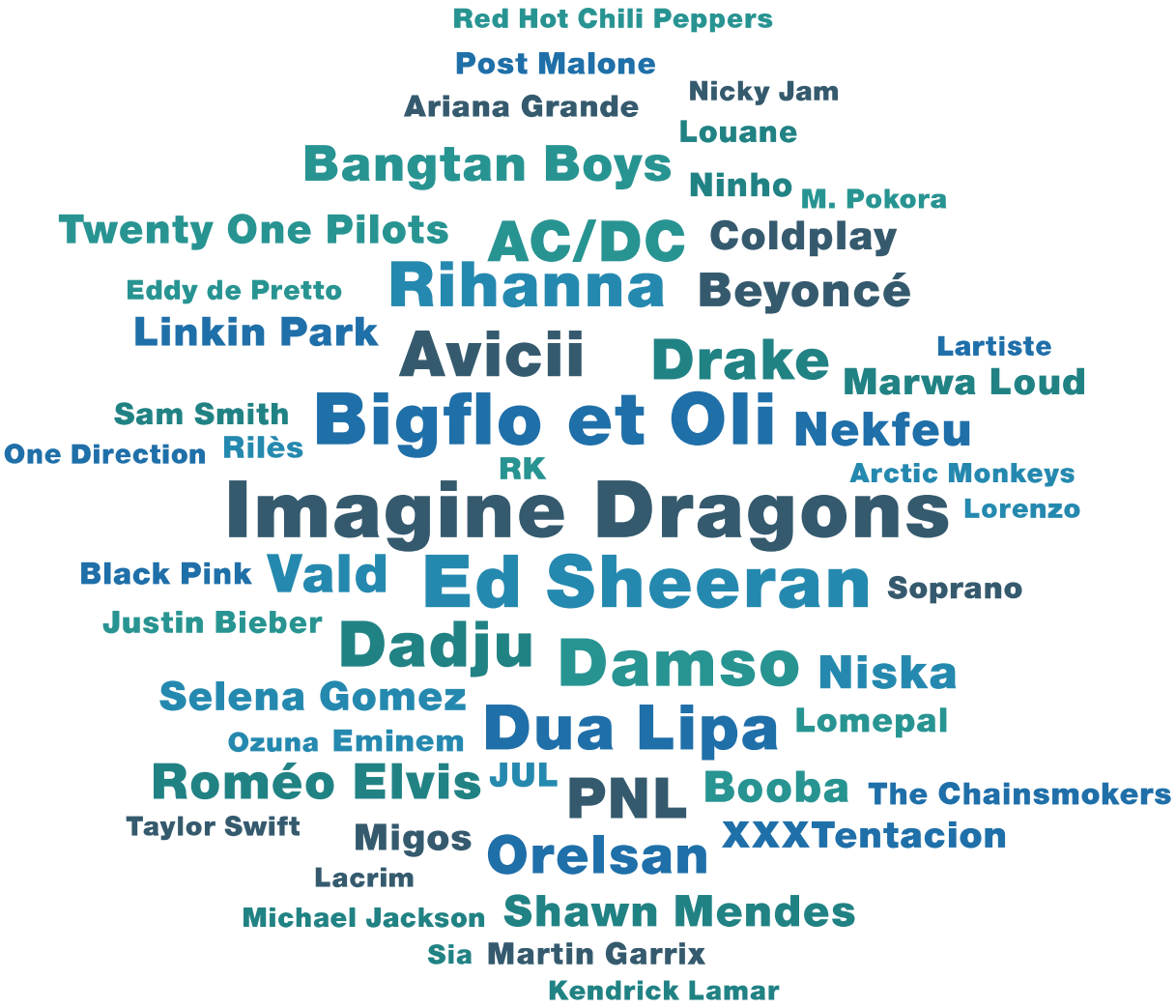

Illustration 27: Most popular musicians and bands in the Romandie

Among **Ticino** adolescents (see Illustration 28), Italian rap groups are very popular. The Italian rapper *Sfera Ebbasta* was clearly in first place with 51 mentions. *Ed Sheeran* (36 Nm.) and *Imagine Dragons* (24 Nm.) followed in second and third places. With *Capo Plaza* (21 Nm.), *Gemitaiz* (18 Nm.) and *Ghali* (14 Nm.), there are three more Italian rappers among the ten most popular musicians in Ticino.

Illustration 28: Most popular musicians and bands in Ticino

6 Internet

The Internet is a daily companion for the great majority of adolescents: 96 % of adolescents use the network daily or several times a week (see chapter 5.3).

Apart from the daily Internet usage duration, there is a description below of which services adolescents make use of on the Internet to gather information and entertain themselves. These two questions were reconfigured for the current survey, as a result of which a comparison with previous JAMES Studies is not possible. However, due to the new question formulation, one can now investigate which Internet services are used more for entertainment and which are used more for information. In addition, one can see the extent to which adolescents themselves create Internet content.

According to their own estimates, adolescents spend **2 hours and 30 minutes** on the Internet – just as long as 2016 (2014: 2 hrs, 2016: 2 hrs 30 Min.). At the weekend, daily Internet time is estimated to be around **4 hours**. This corresponds to an increase of one hour since 2014 (2014: 3 hrs, 2016: 3 hrs 40 Min.). These are average values (median) and there is a significant difference in the information provided by the individual adolescents.

Adolescents with **a migration background** use the Internet for significantly longer than adolescents with Swiss family backgrounds, both during the week as well as at the weekend. **Adolescents from German speaking Switzerland** spend less time on the Internet than adolescents from the other language regions of Switzerland. At the weekend, adolescents with a **low socio-economic status (SeS)** spend longer online than adolescents with a high SeS. Moreover, **boys** spent a longer time on the Internet at weekends than **girls.**

6.1 Internet for entertainment

Internet access for entertainment purposes is described in this chapter. The next chapter (6.2) goes into Internet use for information purposes.

For entertainment purposes, social networks are primarily used (e.g. *Facebook*, *Twitter*, *Instagram*) and video portals (e.g. *YouTube*) (see Illustration 29). In addition, about half of the adolescents regularly make use of the opportunity to stream films, documentaries or series (e.g. on *Netflix*). Search engines like *Google* are used by 44 % daily or several times a week for entertainment purposes, while 42 % regularly just surf. Almost a third make use of portals of TV channels (e.g. *srf.ch*) daily or several times a week for entertainment. Overall, radio via the Internet and portals of newspapers or magazines are only rarely used for entertainment (e.g. *20 minutes online*).

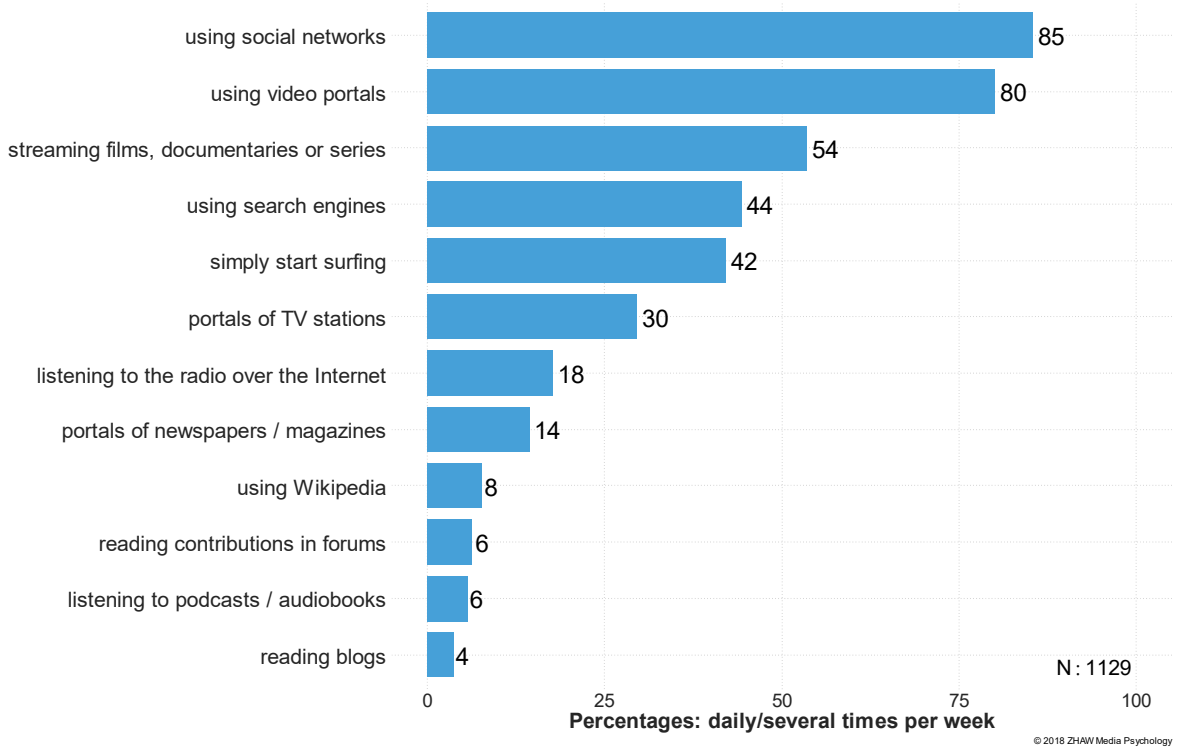

Illustration 29: Entertainment on the Internet

With regard to **age groups**, there are four significant effects (see Illustration 30). Social networks are used by 12-/13-year-olds less often for entertainment than by older adolescents (medium effect) while portals of newspapers and magazines are used more frequently by 18-/19-year-olds than by younger age groups for entertainment purposes (medium effect). A small effect was determined for the streaming of films, documentaries and series: the 12-/13-year-olds stream less often for entertainment than older adolescents. When it comes to search engines, the 16-/17-year-olds use them more often (small effect).

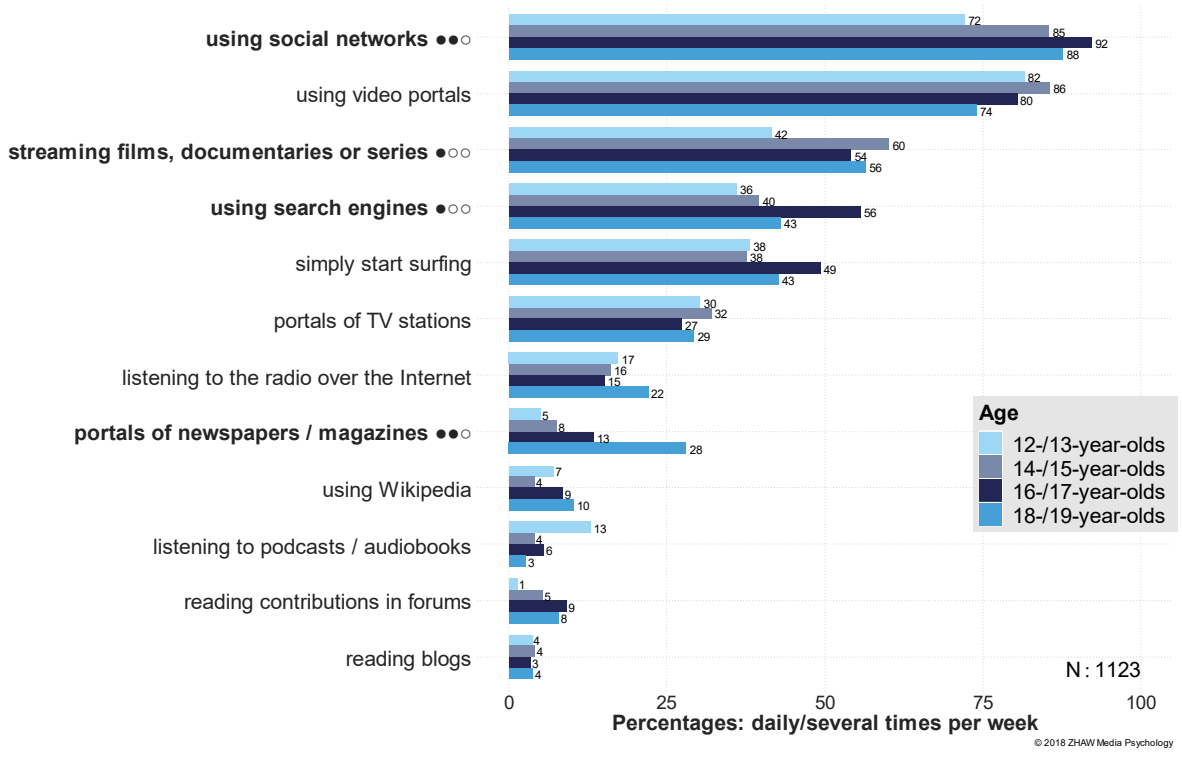

Illustration 30: Entertainment on the Internet according to age groups

Girls (90 % daily or several times a week) use social networks for entertainment more regularly than **boys** (80 %, small effect). They likewise listen to the radio via the Internet more frequently for entertainment (girls: 22 %, boys: 14 %, marginal effect). By contrast, boys make more frequent use of video portals (87 %) and search engines (51 %) for entertainment (girls: 73 % or 38 %, in each case a small effect).

There are several significant differences regarding **family background**. Adolescents with migration background regularly use video portals (89 %), video streaming offers (73 %) and search engines (59 %) for entertainment (Switzerland: 79 %, 50 % or 42 %, in each case a small effect). In contrast, adolescents with a Swiss family background (19 %) listen to the radio via the Internet more often than adolescents with a migration background (11 %, marginal effect).

In different **regions**, different entertainment patterns are evident (see Illustration 31). Simply surfing at random is a method for entertainment used especially often in Ticino (medium effect). Video portals are used more regularly for entertainment by adolescents in West Switzerland than by those of the same age from German-speaking Switzerland (small effect). German-speaking Swiss adolescents use search engines less often for entertainment purposes than adolescents from the two other language regions (small effect). Adolescents in the Romandie use Internet radios (small effect) and portals of newspapers or magazines (marginal effect) less often for entertainment than adolescents from the rest of Switzerland.

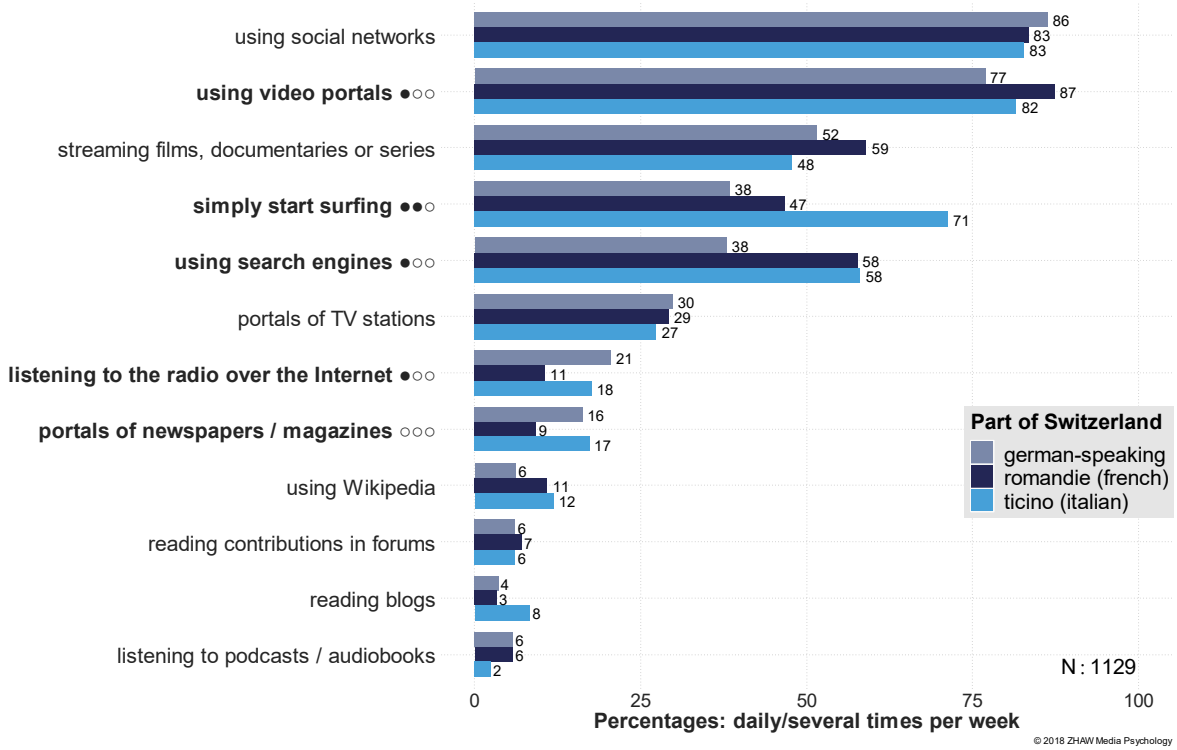

Illustration 31: Entertainment on the Internet according to region

With regard to **school type**, only one significant difference can be demonstrated: secondary I school pupils (22 %) use portals of TV channels less often for entertainment than pupils of secondary (38 %) or junior high schools (36 %, small effect).

In the **rural areas**, (34 %) adolescents make use of portals of TV channels more frequently for entertainment than in the city/agglomeration areas (25 %, small effect).

Due to the changed formulation of the questions, comparison with the surveys from the past is not possible.

6.2 Internet for information

The preferred method to find information on the Internet for adolescents is a search engine (see Illustration 32): 81 % use *Google* or other search machines daily or several times a week. About half of the adolescents make regular use of social networks (e.g. *Facebook*, *Twitter*, *Instagram*) and video portals like *YouTube* as sources of information. A third gather information daily or several times a week in *Wikipedia* or comparable pages. 25 % or 21 % make regular use of the portals of newspapers/magazines (e.g. *20 minutes online*) or of TV channels (e.g. *srf.ch*) as sources of information. 21 % surf daily or several times a week simply at random to gather information. The streaming of films, documentaries or series (e.g. on *Netflix*) is not used very often in connection with the search for information.

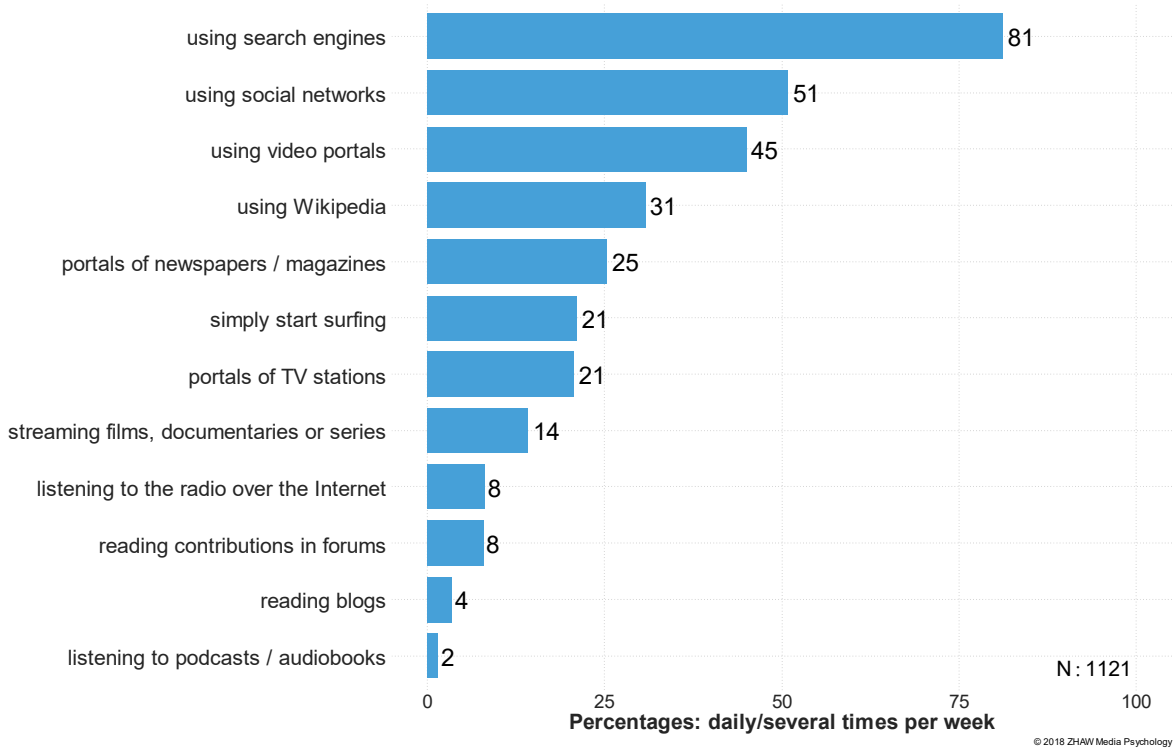

Illustration 32: Information on the Internet

The **age group** 12-/13-year-olds uses search machines (73 %) and social networks (38 %) less often for information purposes than the other age groups (search machines 14-/15-year-olds: 78 %, 16-/17-year-olds: 86 %, 18-/19-year-olds: 86 %, social networks 14-/15-year-olds: 51 %, 16-/17-year-olds: 56 %, 18-/19-year-olds: 53 %, in each case a small effect). A major effect was evident in the portals of newspapers or magazines (e.g. *20 minutes online*): the older adolescents are, the more regularly they make use of these portals for information purposes (12-/13-year-olds: 8 %, 14-/15-year-olds: 17 %, 16-/17-year-olds: 26 %, 18-/19-year-olds: 44 %).

Boys use video portals (53 %) and portals of TV channels (27 %) as sources of information more often than **girls** (37 % or 15 %, in each case a small effect).

Video portals are used by adolescents with a **migration background** (55 %) more frequently to gather information than by adolescents with a Swiss family background (43 %, small effect). A similar effect is evident in the streaming of films, documentaries and series (migration background: 24 %, Switzerland: 12 %, small effect).

There are differences between the **language regions** with regard to information behaviour. Ticino adolescents (62 %) surf far more regularly, simply at random to collect information, than adolescents in

German-speaking (18 %) and Romandie (23 %, major effect). Among Ticino adolescents, this is actually the second most commonly used form of looking for information on the Internet. Adolescents from German-speaking Switzerland (6 %) read articles in forums less often than adolescents from the Romandie (13 %, Ticino: 10 %, small effect).

There are two effects regarding **school type**. Intermediate school pupils (22 %) make more frequent use of films, documentaries and series as sources of information than pupils from secondary school (11 %) and secondary I (9 %, small effect). The opposite is the case regarding portals of newspapers and magazines: these are used more frequently by adolescents from secondary I (20 %) than adolescents from the two other school types (junior high school: 5 %, secondary: 9 %, small effect).

Simply surfing at random is practised least by adolescents with an average **socio-economic status (SeS)** (18 %) as a way of obtaining information (high: 26 %, low: 26 %, small effect).

In **rural areas** (54 %) social networks more frequently serve as a source of information than in the city/agglomeration (46 %, marginal effect).

Due to the altered formulation of the questions, comparison with the results of previous years is not possible.

6.3 Comparison of Internet use for entertainment and for information

Thanks to the reformulation of the question, it is possible to compare which Internet offerings are used primarily for entertainment or for information (see Illustration 33).
Social networks, video portals (e.g. *YouTube*) and streaming services (films, documentaries, series, e.g. on *Netflix*) are used primarily for entertainment. Simply surfing at random is also assigned to entertainment-oriented usage. Search engines and *Wikipedia* by contrast are used primarily for information purposes. TV portals and Internet radio are used more for entertainment than for looking for information, but both were rarely used overall. This also applies to podcasts/audio books. The opposite is the case regarding portals of newspapers and magazines: these are used more frequently for information than for entertainment. Forums and blogs are in little demand among adolescents, neither for entertainment nor for information.
Moreover, it is striking that social networks, search engines and video portals are used primarily for one purpose (e.g. entertainment), but also relatively often for a secondary purpose (e.g. information).

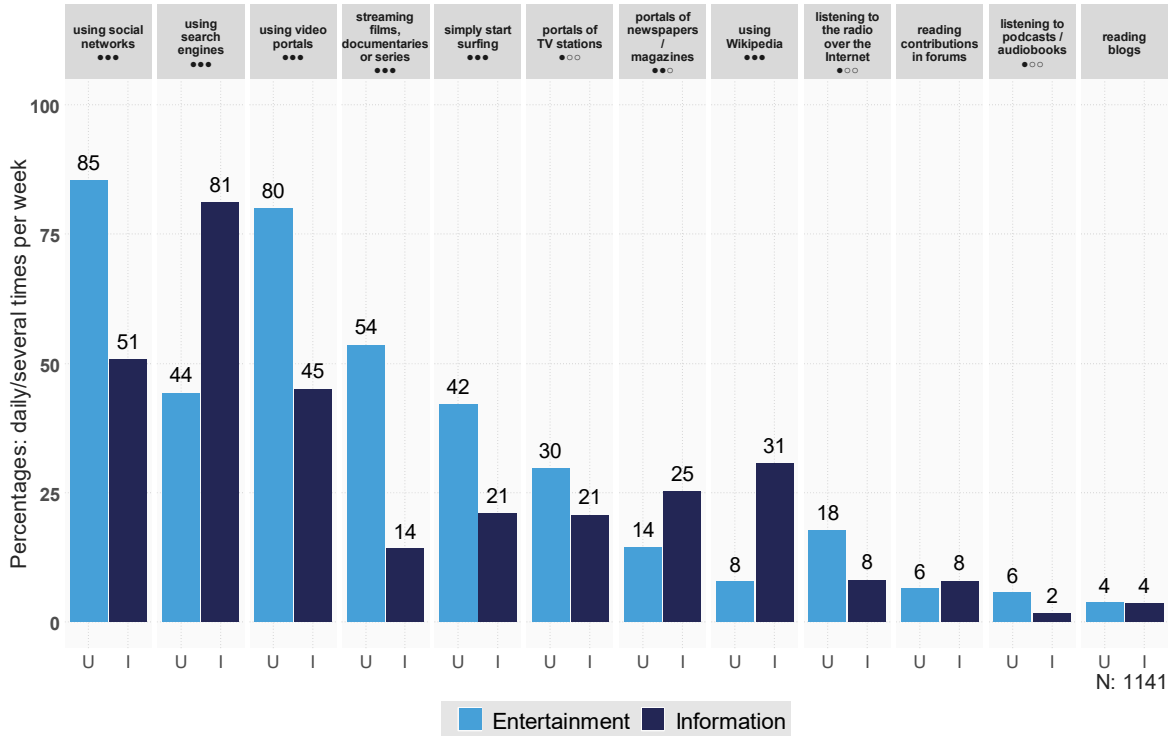

Illustration 33: Use of entertainment offerings for entertainment (E) or information (I).

6.4 Creation of Internet content

Only a few adolescents actively help to shape the Internet. Photos or videos are most commonly posted on the Internet. 9 % indicated they upload photos or videos daily or several times a week (see Illustration 34). Most adolescents do this less often and about a quarter state they never post photos or videos on the Internet. 5 % of adolescents frequently post to newsgroups or forums and 4 % regularly upload music- or sound-files. However, the great majority never engage in these activities.

Differences can only be identified regarding **regions**. Adolescents from Romandie (8 %) and Ticino (8 %) upload music- or sound-files less often than adolescents from German-speaking regions (3 %, small effect). Adolescents from the Romandie (1 %) are less active in newsgroups and forums than those from German-speaking regions (6 %, Ticino: 4 %, small effect).

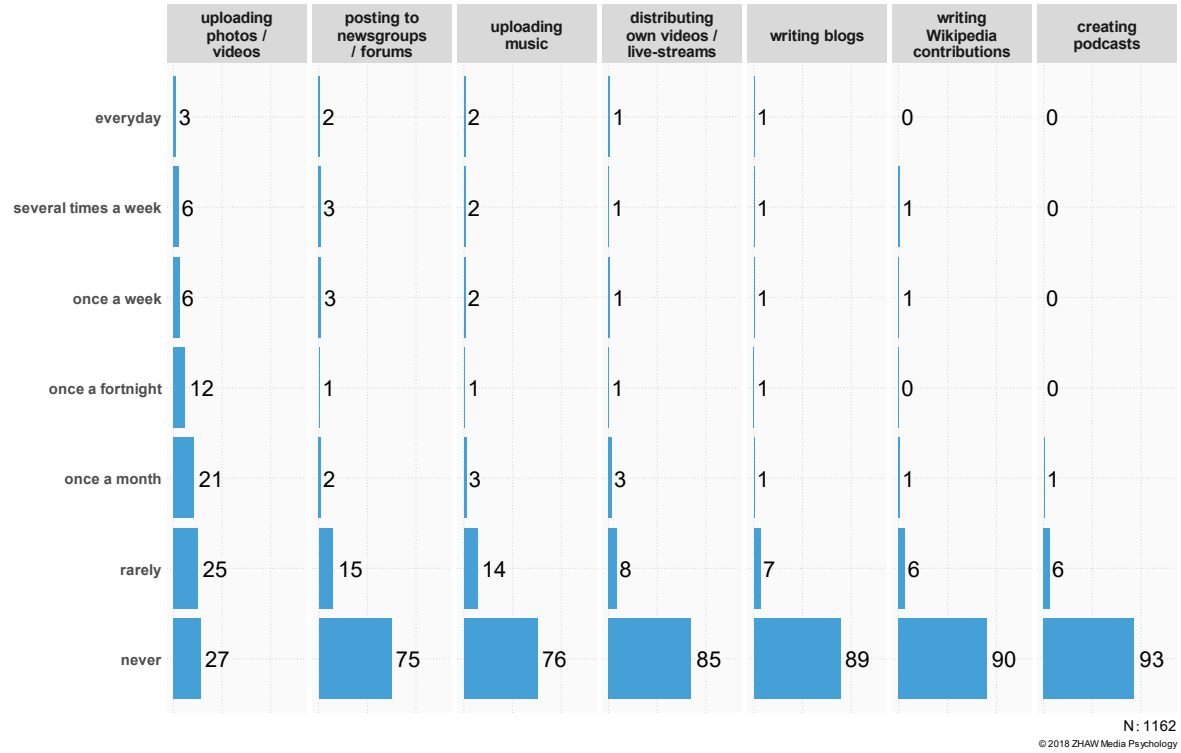

Illustration 34: Creation of Internet content

Compared **over five years** (see Illustration 35), a decline is evident in the regular posting to newsgroups and forums, blogs (in each case a small effect) and *Wikipedia* (marginal effect). However, these effects were already present in 2016 (Waller et al., 2016) and consequently are attributable to differences in previous years.

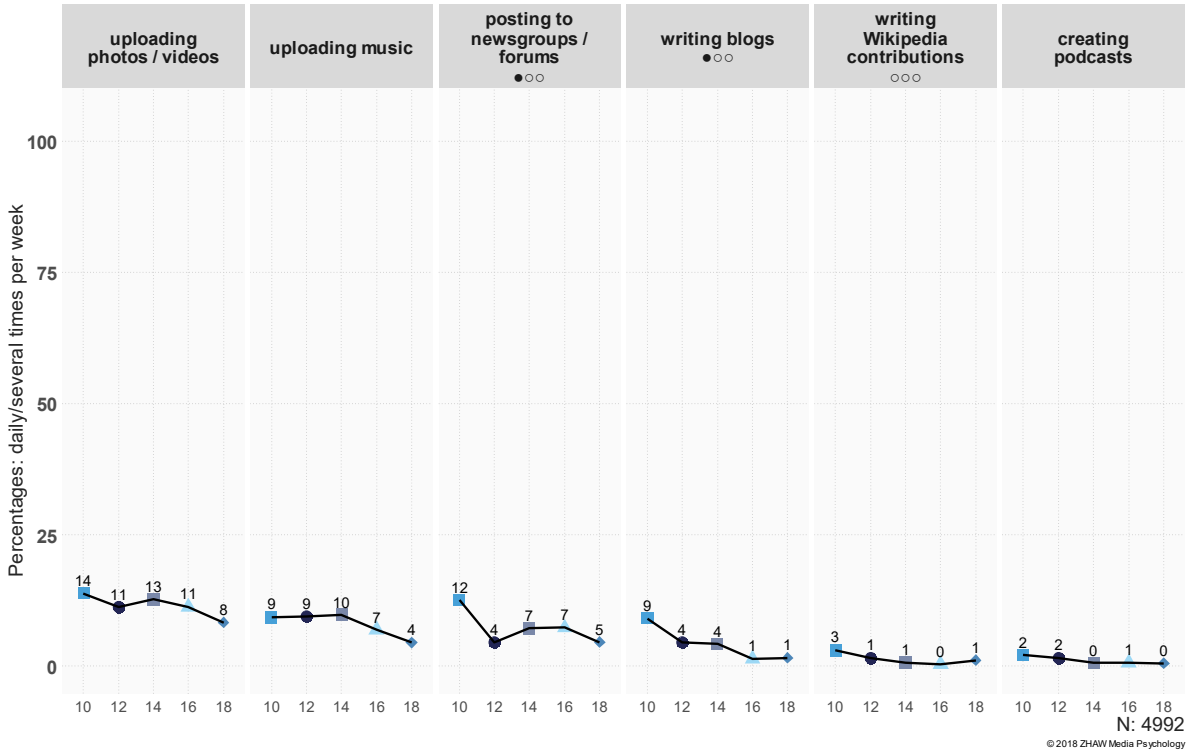

Illustration 35: Creation of Internet content over time 2010-2018

7 Social networks

Use of social networks is one of the most frequent media leisure activities: 90 % of adolescents in Switzerland use these daily or several times a week - the majority for entertainment, but also for information (see chapter 5.3 and chapter 6.3). In 2018 **94 %** of adolescents in Switzerland ***were registered in at least one* social network.**

This chapter shows which platforms adolescents most commonly have an account with and which platforms they use most frequently. Moreover, in 2018 the frequency of particular activities within social networks was surveyed for the first time.

WhatsApp is not considered a social network in this report, since there is no means of public communication there. References to the use of *WhatsApp* can be found in the chapter 10.5 on mobile phone use.

7.1 Memberships in social networks

The social networks with the most memberships are *Instagram* and *Snapchat*: 87 % or 86 % respectively of all adolescents in Switzerland have an account with these two platforms (see Illustration 36). Almost two-thirds of the adolescents indicate they have an account with *Google+*, 52 % with *Facebook*. About 40 % of adolescents are registered respectively at *Pinterest*, *Twitter* and *musical.ly*. In this respect, it should be noted that *musical.ly* was integrated at the beginning of August into the app *TikTok*, and is now available under this new name in app stores. A quarter of adolescents have a *Tumblr* account and every fifth a *Tinder* account. Among the queried networks, *MySpace* is the least popular: only 14 % of adolescents are registered there.

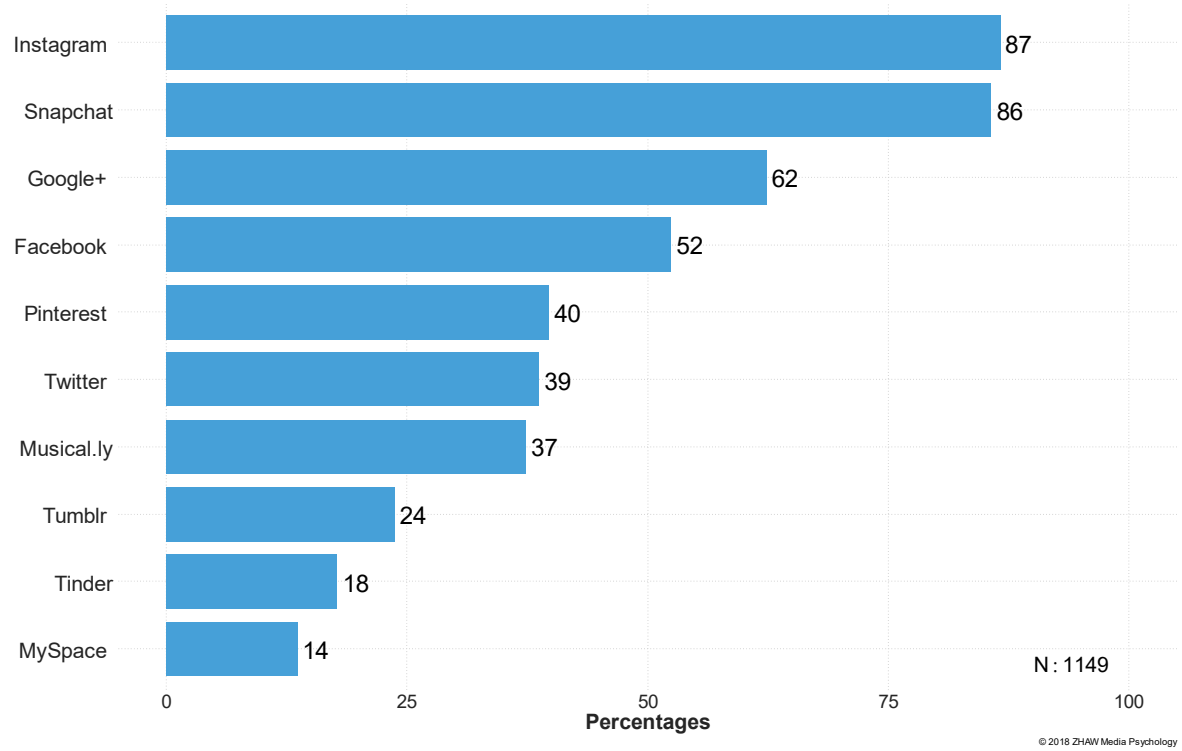

Illustration 36: Membership in social networks

Age effects are evident in four of the social networks. Compared to older age groups, 12-/13-year-olds have an account least often with *Instagram* and *Snapchat*. The older the adolescents are, the more

likely they are to have a *Facebook* account. The opposite is true for *musical.ly*: 12- to 15-year-olds are registered more often here than older adolescents.

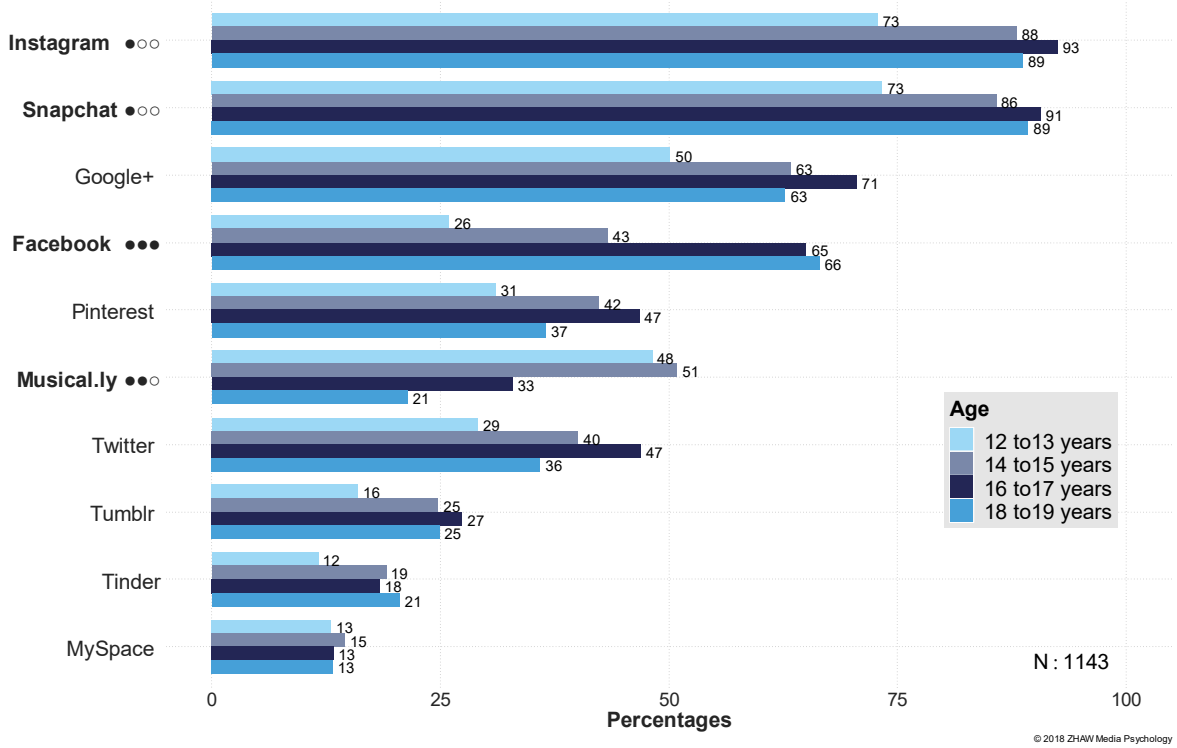

Illustration 37: Membership in social networks according to age group

There are different preferences between **genders** (see Illustration 38). Girls have an account with *Pinterest* and *musical.ly* more often than boys. By contrast, boys are registered more often with *Facebook*, *Twitter*, *Tinder* and *MySpace* than girls.

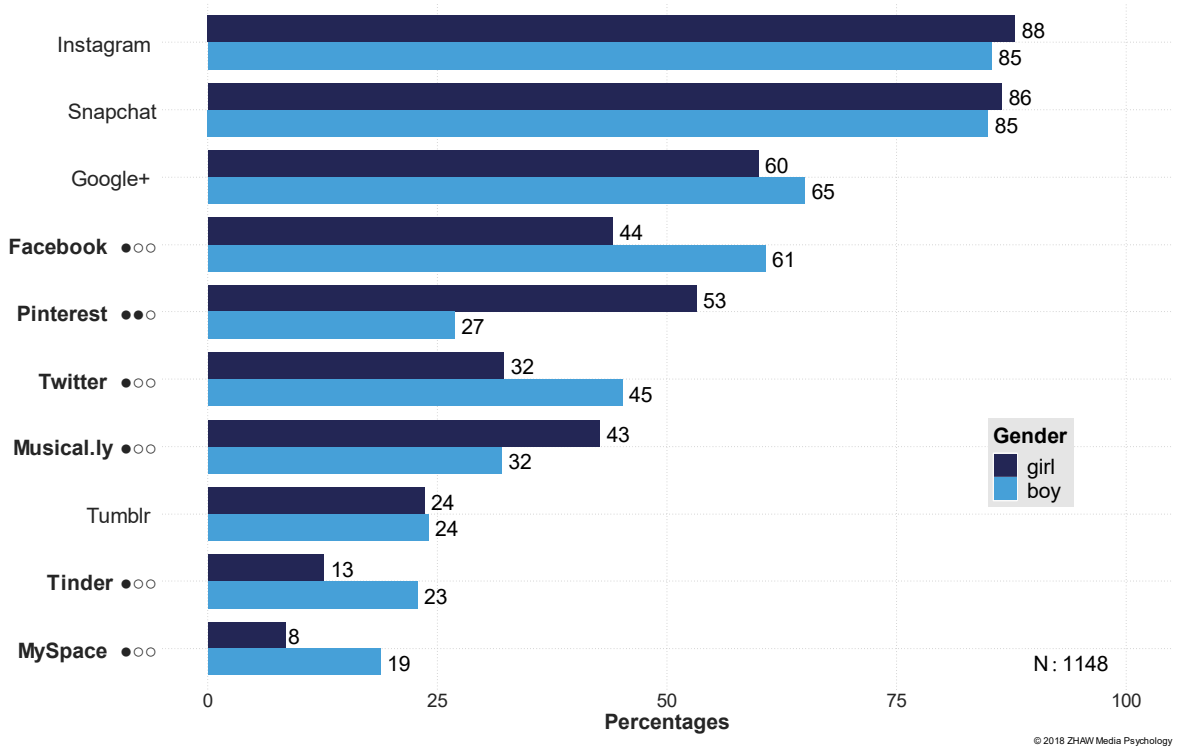

Illustration 38: Memberships in social networks according to gender

Adolescents with a **migration background** tend to be registered with more social networks. Significant differences can be shown in *musical.ly* (51 % vs. 35 %, small effect) and *Tumblr* (36 % vs. 22 %) and *Tinder* (27 % vs. 16 %, in each case a marginal effect).

There are two significant differences between **regions**: *Pinterest* is especially popular in the Romandie (48 %, German-speaking Switzerland: 37 %, Ticino: 31 %, small effect), and adolescents in the Romandie are comparatively often members of *Twitter* (Romandie: 50 %, German-speaking Switzerland: 35 %, Ticino: 28 %, small effect).

The **school type** or formal educational level correlates with membership in social networks (see Illustration 39). It is the case on many platforms that secondary I pupils have an account least often, junior high school pupils are registered most often and the share of secondary pupils is in between.

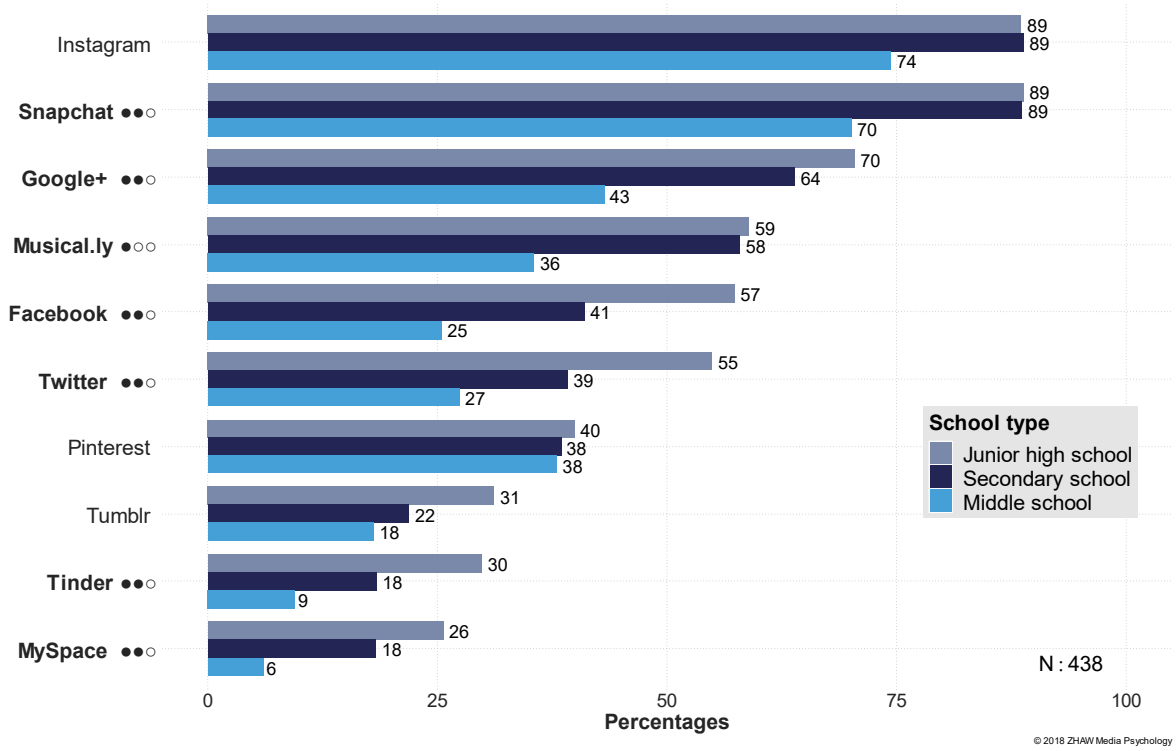

Illustration 39: Memberships in social networks according to school type

Facebook is more popular in **rural regions** than in **cities/agglomerations.** In rural regions, 59 % of adolescents have a *Facebook* account, in urban regions it is 45 % (small effect).

Due to an adjustment in the question formulation, a comparison **over time** with earlier JAMES studies is not possible.

7.2 Usage frequency of social networks

When calculating usage frequencies, only those 94 % of adolescents were considered who were registered with at least one social network.

Instagram and *Snapchat* are used most frequently (see Illustration 40): 86 % or 81 % respectively, of adolescents visit these two networks at least once a week, 61 % or 60 % respectively even several times a day. All other social networks are used far less often. *Facebook* and *Google+* are used by 23 % or 22 % respectively several times a week or more often, *Pinterest* and *Twitter* are each used regularly by

12 % of adolescents; in the case of *musical.ly* it is 8 %. In the case of *Tumblr* (3 %), *Tinder* (1 %) and *MySpace* (1 %) one can only speak of regular use in isolated cases.

What is striking in the case of many networks is the relatively large proportion of adolescents who do not have any account at all. A majority of adolescents do not have a corresponding account for many of the queried networks.

The category "never" is also interesting: this means the adolescents have an account, but never use the corresponding account at all. These could be referred to as so-called dead accounts. This phenomenon is currently most common with *Google+* (21 %) and *musical.ly* (20 %).

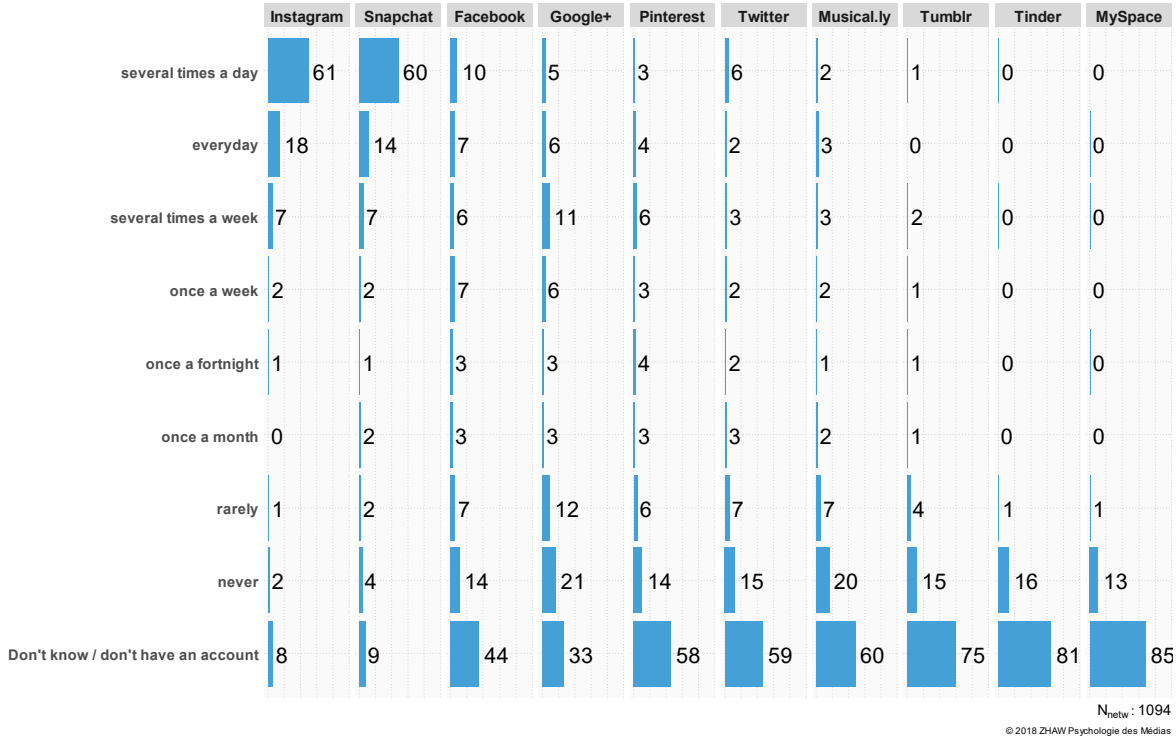

Illustration 40: Usage frequency of social networks (basis: adolescents who are registered with at least one social network)

With regard to **age groups,** the same pattern is evident with regard to usage frequency as with membership in the corresponding networks (see Illustration 41). *Instagram* and *Snapchat* are used least often by 12-/13-year-olds. At *Facebook*, usage frequency increases with age. By contrast, in the case of *musical.ly* 12-/13-year-olds are the most frequent users, while use declines markedly with increasing age.

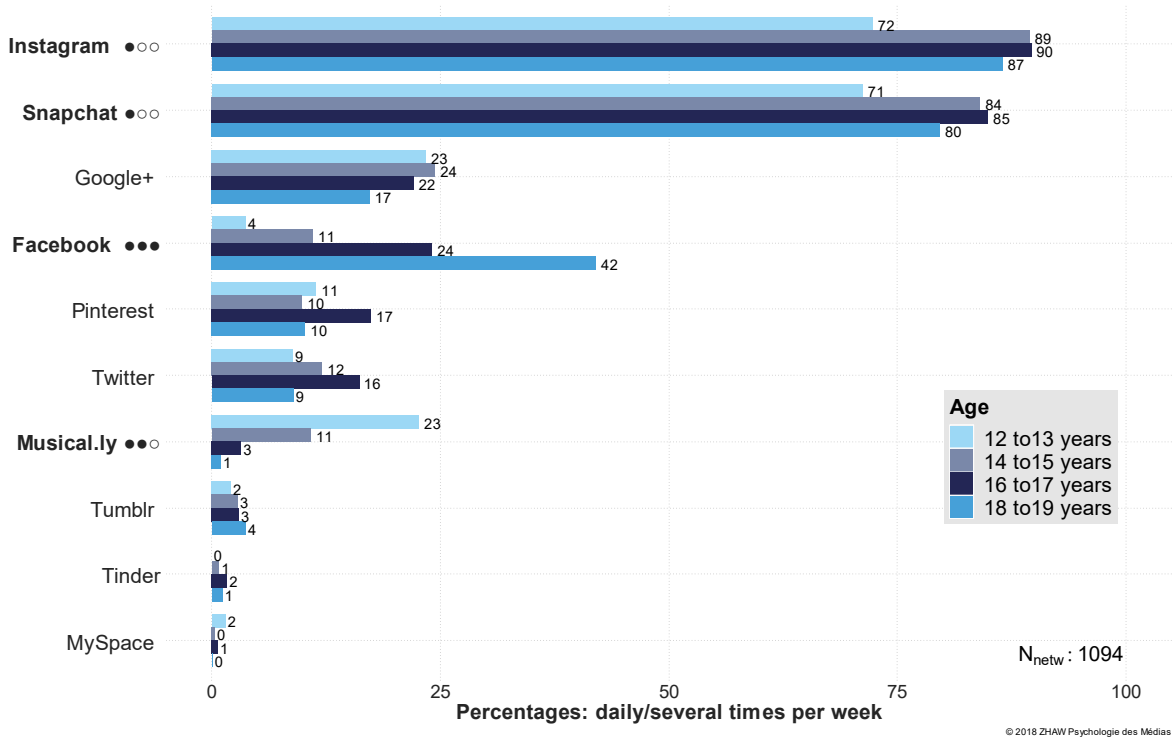

Illustration 41: Usage frequency of social networks according to age group (basis: adolescents who are registered with at least one social network)

Three of the social networks are used more often by **girls** than **boys**; to be specific, *Pinterest* (20 % vs. 5 %, medium effect), *Snapchat* (85 % vs. 76 %) and *musical.ly* (13 % vs. 2 %, in each case a small effect).

Two significant differences can be determined between the **regions**. *Snapchat* is used more regularly in German-speaking Switzerland (81 %) and the Romandie (83 %) than in Ticino (62 %, small effect). Adolescents in the Romandie (21 %) use *Twitter* more often than adolescents in German-speaking Switzerland (8 %) and Ticino (7 %, small effect).

The lower the **formal educational level,** the more regularly the adolescents use *Google+* and *Facebook*. In the case of *Facebook* (junior high school: 18 %, secondary: 7 %, secondary I: 4 %) involves a medium effect, in the case of *Google+* (junior high school: 36 %, secondary: 25 %, secondary I: 17 %) it is a small effect.

With regard to the **socio-economic status (SeS)** there was only a small effect: adolescents with a medium SeS (78 %) use *Snapchat* less often than adolescents with a high (88 %) or low SeS (84 %).

Comparison **over time** with the last three JAMES surveys shows interesting changes (see Illustration 42). The biggest effect was in the *Facebook* usage frequency. While in 2014 almost four-fifths of the adolescents used *Facebook* regularly, this is currently only about a fifth. Use of *Instagram* increased further in 2018: 86 % use the network at least several times a week; a significant small effect did exist in 2016. The use of *Pinterest* (small effect) and *Google+* has also increased (marginal effect). The use of *Tumblr* has decreased (small effect). In the case of *Snapchat*, *MySpace* and *Tinder*, which featured in this survey for the first time, there are no significant differences over time.

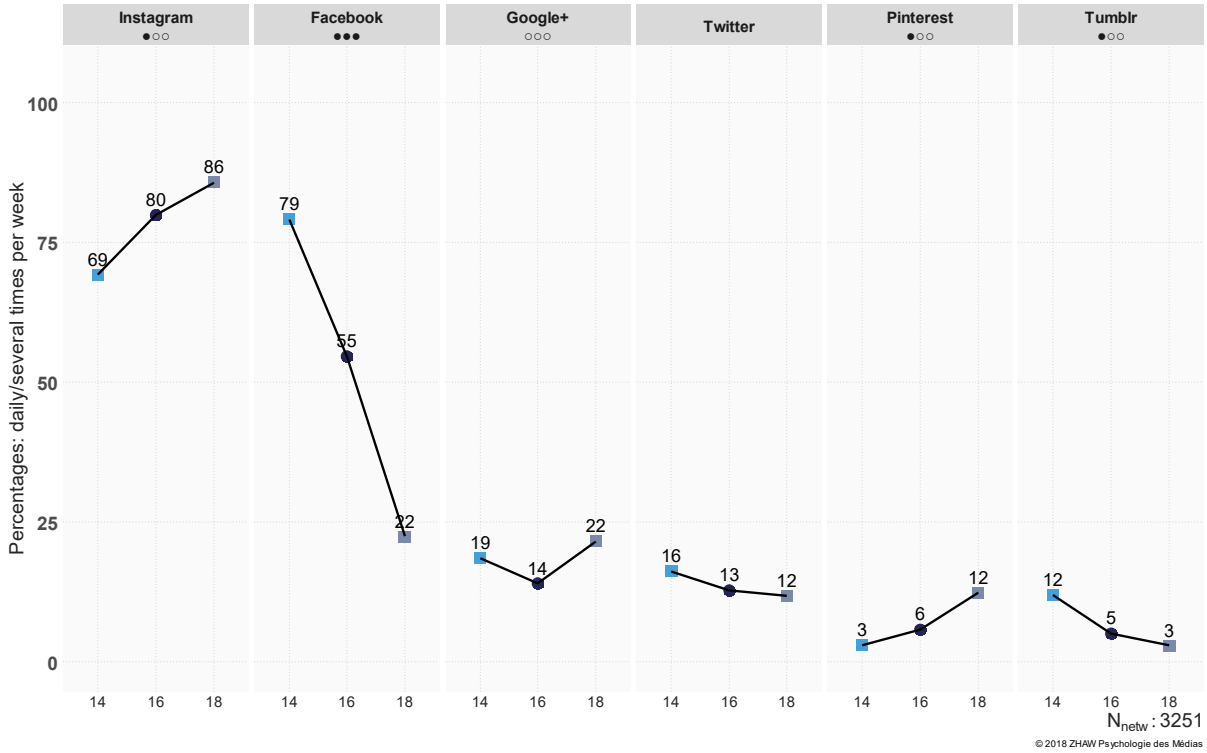

Illustration 42: Usage frequency of social networks over time 2014-2018

7.3 Activities in social networks

This year, the frequency of particular activities within social networks was surveyed for the first time. Among other things, the number of times the adolescents watch, like, post or share on the corresponding platforms was surveyed. Photos, videos or texts are regarded as contributions. The following analyses once again refer to the 94 % of adolescents registered with at least one social network.

Within the social networks, looking at or liking contributions of others was most common (see Illustration 43). 82 % or 80 % respectively of the adolescents do this daily or several times a week. Chatting or writing personal messages within social networks is popular. Overall, active posting is done less often. Contributions that disappear spontaneously after a certain time are most common: 45 % post such time-limited contributions regularly. This in particular includes so-called snaps and stories. Commentaries on contributions are written by a third of the adolescents daily or several times a week. Contributions visible only to selected people are regularly posted by 29 %. Sharing of contributions that the adolescents saw elsewhere is fairly uncommon. Posting of publicly visible and non-time-restricted photos, videos or texts is even less common. Making their own video live-streams is almost non-existent among the adolescents.

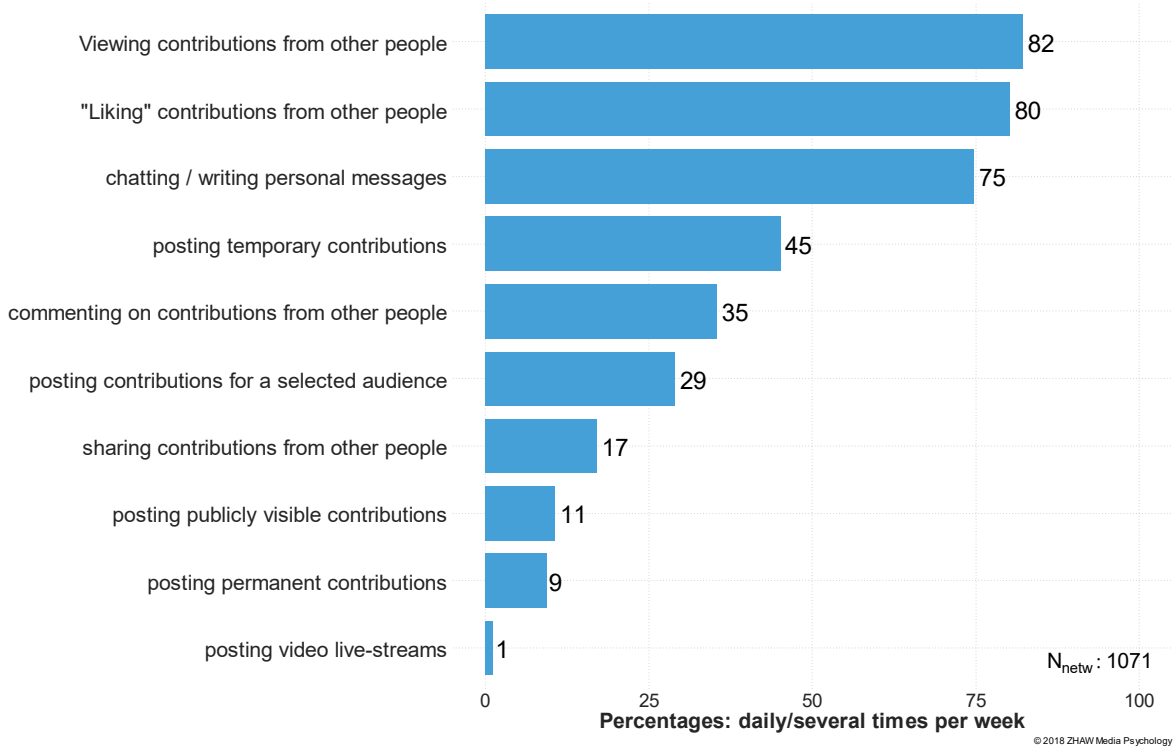

Illustration 43: Activities in social networks

The youngest **age group** looks at contributions of others less often than the older adolescents: 72 %, 14-/15-year-olds: 84 %, 16-/17-year-olds: 86 %, 18-/19-year-olds: 82 %, small effect). By contrast, the 12- to 15-year-olds comment on contributions of others more frequently than the 18-/19-year-olds (12-/13-year-olds: 39 %, 14-/15-year-olds: 42 %, 16-/17-year-olds: 34 %, 18-/19-year-olds: 28 %, small effect).

Girls watch contributions of others less often than **boys** (86 % vs. 78 %, marginal effect). Furthermore, girls also like contributions of others more often than boys (84 % vs. 76 %, small effect).

Adolescents with a **migration background** comment on contributions of others less often than Swiss adolescents of their own age (51 % vs. 33 %, small effect).

There are also differences between **regions**: German-speaking Swiss adolescents (86 %) look at contributions of others less often than adolescents in the Romandie (75 %, Ticino: 79 %, small effect). Moreover, German-speaking Swiss adolescents (77 %) exploit the opportunity to chat or write personal messages within the social networks more often than adolescents from Ticino (54 %, the Romandie: 71 %, medium effect). By contrast, German-speaking Swiss adolescents post contributions for a selected audience less often (25 %) than adolescents from the Romandie and Ticino (in each case 36 %, small effect).

With regard to **formal educational level**, there is only one significant effect: Intermediate pupils (21 %) post visible contributions less often than those of the same age in secondary school (10 %) and secondary school I (5 %, medium effect).

8 Problematic aspects of media use

Potentially risky behaviour, handling of privacy and experience with cybermobbing/bullying and cybergrooming are viewed here as problematic aspects of media use. The use and proliferation of pornography and violent content are also dealt with in this chapter.

8.1 Potentially risky behaviour and privacy

This chapter discusses behaviour that occurs in connection with media use and is associated with certain risks. This includes the handling of the user's own privacy on social networks. The adolescents were asked in this connection whether they had activated the privacy settings and whether they were worried about the visibility of personal information. Both questions were only posed to those adolescents who are registered with at least one social network (94 %, see chapter 7). Accordingly, the evaluations on the handling of privacy are based on the information of these 94 %.
Under certain circumstances, meeting up in person with strangers one met online can represent another form of risky behaviour. In certain media usage forms, such as dating apps, getting to know strangers is the primary goal and also in so-called LAN parties among gamers, people often get together for the first time outside of the Internet, to play games together. In most cases, such meetings occur on the basis of mutual interest and agreement. Nevertheless, there is a risk of abuse and a certain amount of caution is always appropriate.

With regard to the handling of privacy, almost three-quarters (72 %) of all adolescents claim to protect their privacy and 31 % worry about the visibility of personal information. 42 % of all of those surveyed have already once met a person in real life they got to know on the Internet.

Protection of privacy increases significantly with **age**, but worrying about the visibility of personal data does not (see Illustration 44). The older the adolescents are, the more likely they are to have already met up in real life with an Internet acquaintance.

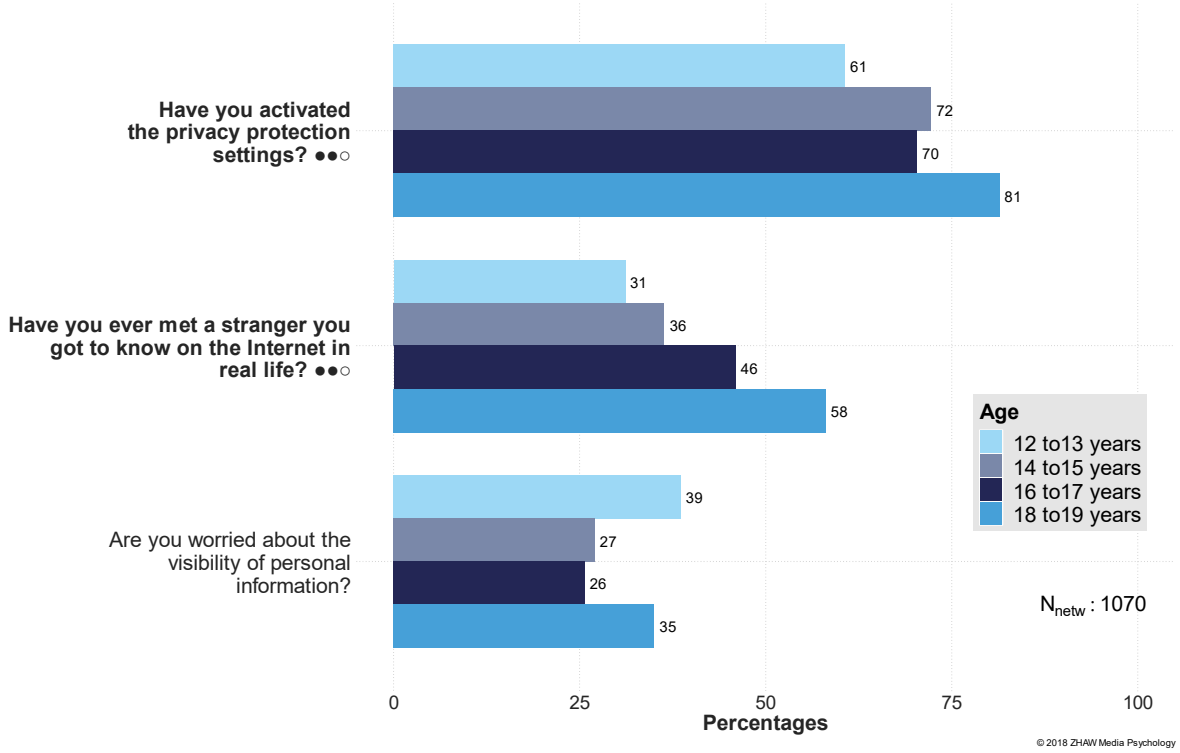

Illustration 44: Risky behaviour and privacy protection according to age groups

Girls are more likely to protect their privacy and worry about the visibility of personal information (see Illustration 45). Both **genders** have met strangers equally often whom they got to know on the Internet.

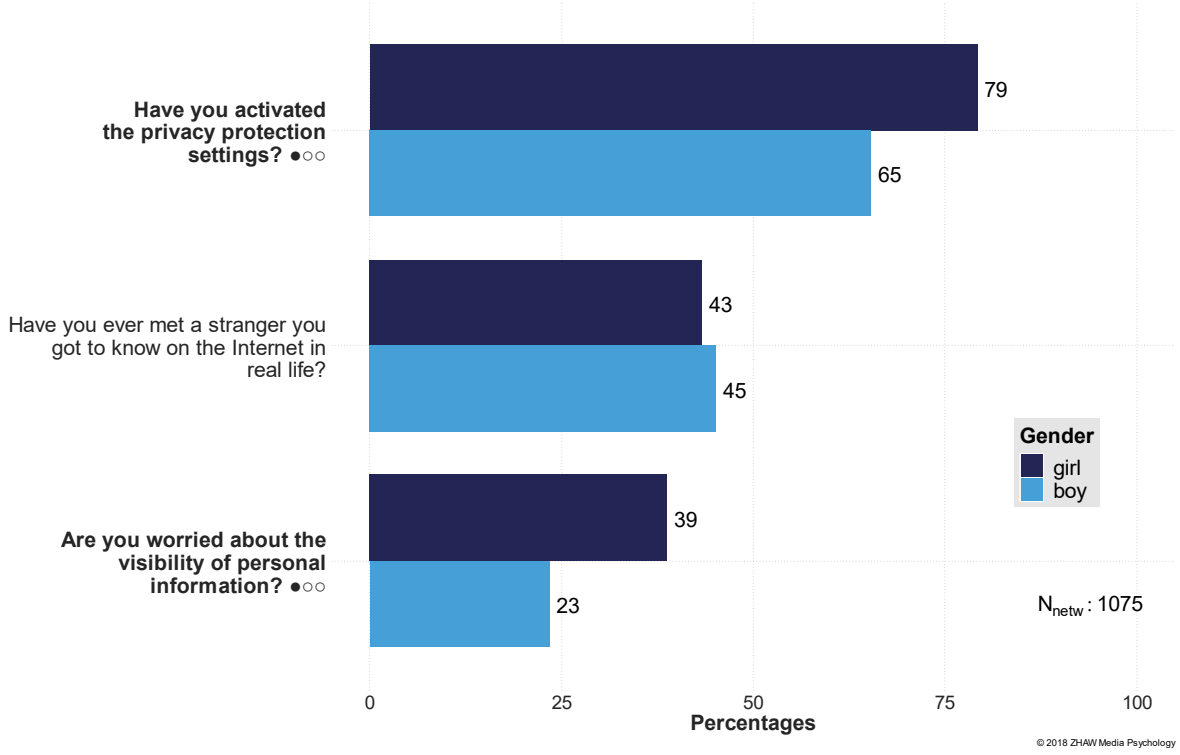

Illustration 45: Risky behaviour and privacy according to gender

Swiss adolescents are more likely to protect their privacy (75 %) than adolescents with a foreign **family background** (60 %, small effect). The two sub-groups do not differ with regard to worrying about the

visibility of information. There are also no differences about meeting strangers when it comes to family background.

There are no differences between the various **regions** regarding protection of privacy. However, at 24%, adolescents in German-speaking Switzerland worry a lot less about the visibility of their data than adolescents from the Romandie (47 %) and Ticino (38 %). This involves a medium effect. No differences emerged between the regions regarding meeting strangers.

The **school type** correlates with the protection of privacy (medium effect). At 51 %, markedly fewer adolescents from junior high school protect their privacy than adolescents with a higher formal educational level (secondary: 75 %, secondary I: 70 %). Otherwise, there are no differences between the three school types.

Compared **over time**, changes only occurred in relation to the protection of privacy (small effect). The proportion of adolescents who have activated their privacy settings has declined continuously over the years (2012: 84 %, 2014: 81 %, 2016: 74 %, 2018: 72 %).

8.2 Cybermobbing/bullying and cybergrooming

Cybermobbing/bullying experiences were surveyed on the basis of three questions: for example, 23 % of the adolescents stated that they had already experienced someone trying to put them down on the Internet. 16 % of those surveyed had already been sent insulting texts or photos with a mobile phone or computer and 12 % had had false or insulting things spread about them on the Internet. 33 % had already experienced photos or videos of them being put online without their consent. If the person affected was not bothered by this, it was no problem. 37 % of the adolescents, who had already been affected by this, claimed it did not bother them.

If one is present on social networks or has personal contact information on the Internet, one can be contacted in this way - under certain circumstances, in a very unpleasant manner. One speaks of cybergrooming if someone is contacted by a stranger online with undesired sexual intentions. 30 % of the adolescents have already experienced this (see Illustration 46).

There are no significant differences between the **age groups** when it comes to experiencing cybermobbing/bullying. However, cybergrooming experiences increase significantly with age (see Illustration 46).

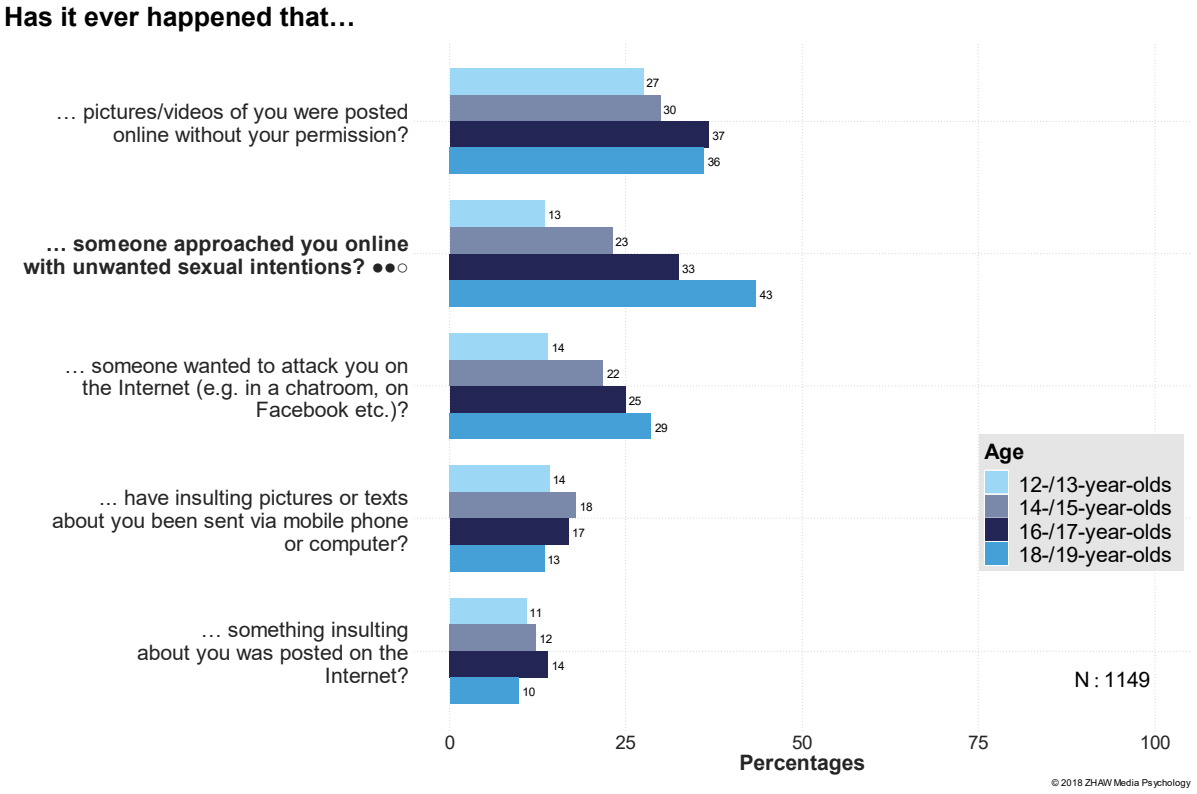

Illustration 46: Cybermobbing/bullying and cybergrooming according to age groups

There are also no differences between the **genders** regarding cybermobbing/bullying, but significant differences in the area of cybergrooming do exist (see Illustration 47). Girls are confronted with cybergrooming far more often than boys.

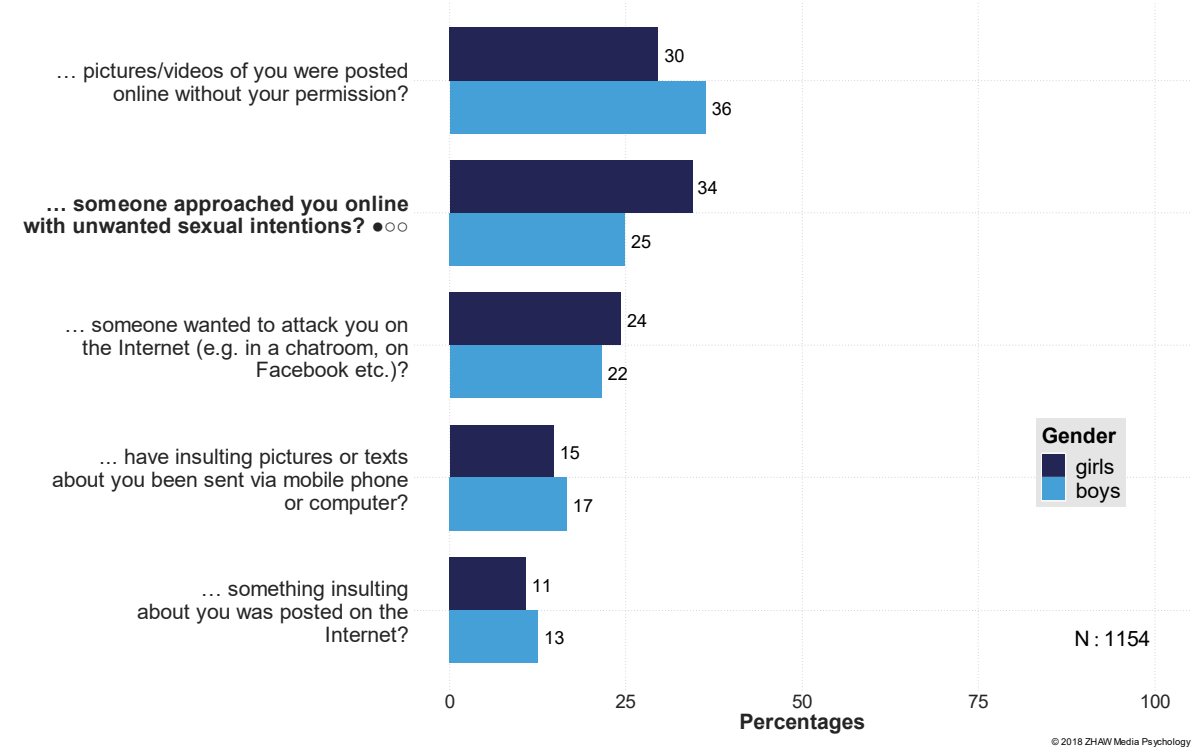

Illustration 47: Cybermobbing/bullying and cybergrooming according to gender

Compared **over time**, a slight increase in cybergrooming is evident over the last four years (2014: 19 %, 2016: 25 %, 2018: 30 %, small effect).

8.3 Pornography and eroticism

Somewhat less than half (44 %) of Swiss adolescents have already watched pornographic films on mobile phones or computers. Only 8 % claim to have sent pornographic films themselves.
The adolescents were not only asked about their consumption of pornography, but also about **sexting**. This refers to sending self-made erotic or provocative photos or videos. 12 % of the adolescents surveyed have already done so. 40 % have already received such photos or videos from others, though due to the formulation of the question, it is not quite clear whether this involved photos or videos produced by the sender or third parties. Therefore, this rather high number should be treated cautiously.

All activities related to pornography consumption and sexting increase markedly with **age** (see Illustration 48).

Has it ever happened that…

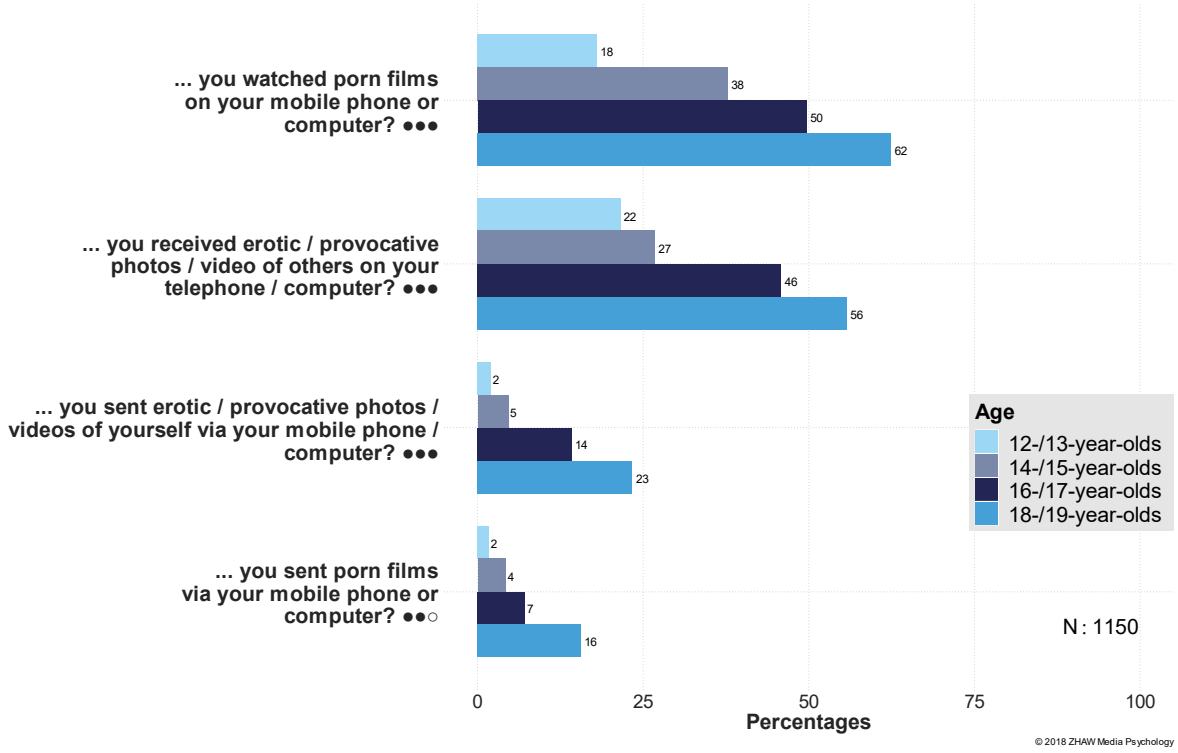

Illustration 48: Erotic or pornographic content according to age groups

The differences between the two **genders** are also very clear, but only for pornography consumption (see Illustration 49). Boys have watched pornographic films far more often (major effect) than girls and also sent significantly more pornographic films (small effect). There are no gender differences for sexting.

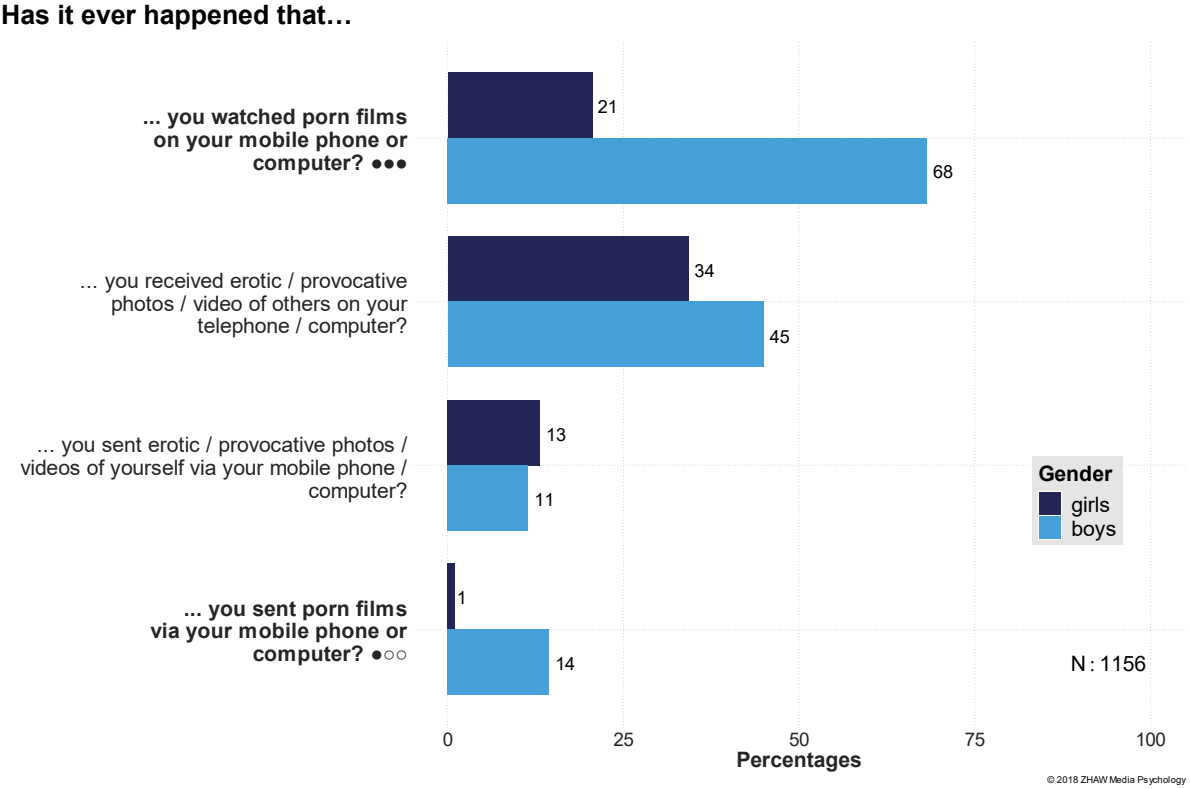

Illustration 49: Erotic or pornographic content according to gender

Family background a role regarding the sending of erotic or provocative photos or videos of the adolescents themselves. 20 % of adolescents with a migration background have already done this, compared to 11 % of Swiss adolescents, though the effect here is marginal

Adolescents from the **Romandie** have sent erotic or provocative photos or videos of themselves to others more often (19 %) than adolescents from German-speaking Switzerland (10 %) or Ticino (7 %, small effect).

There is also only one individual difference with a small effect for the **school type**. More adolescents with a low formal educational level have already sent pornographic films via a mobile phone (10 %) than those with a medium (2 %) or high educational level (1 %). The differences go in the same direction for the other three questions, but not significantly.

Questions about pornographic films and sexting have been asked since the 2014 survey. Since then, there have been no significant changes **over time**.

8.4 Violence in the media

Potential risk factors not only include the handling of privacy and pornography/sexting, but also aspects of media violence. In this regard, the adolescents were asked whether they had already had problems on account of prohibited content on their computer or mobile phone. Both pornography as well as violent videos were mentioned as examples. Almost two-thirds of Swiss adolescents have already watched brutal videos on mobile phones or computers. At 13 %, far fewer adolescents have already sent such videos themselves. 8 % of the adolescents claimed to have already filmed a fake or genuine fight. 5 % had already had problems on account of prohibited content such as pornography or violence on their mobile phone or computer.

There is a significant increase in frequency across the **age groups** in watching and sending brutal videos (see Illustration 50).

Has it ever happened that…

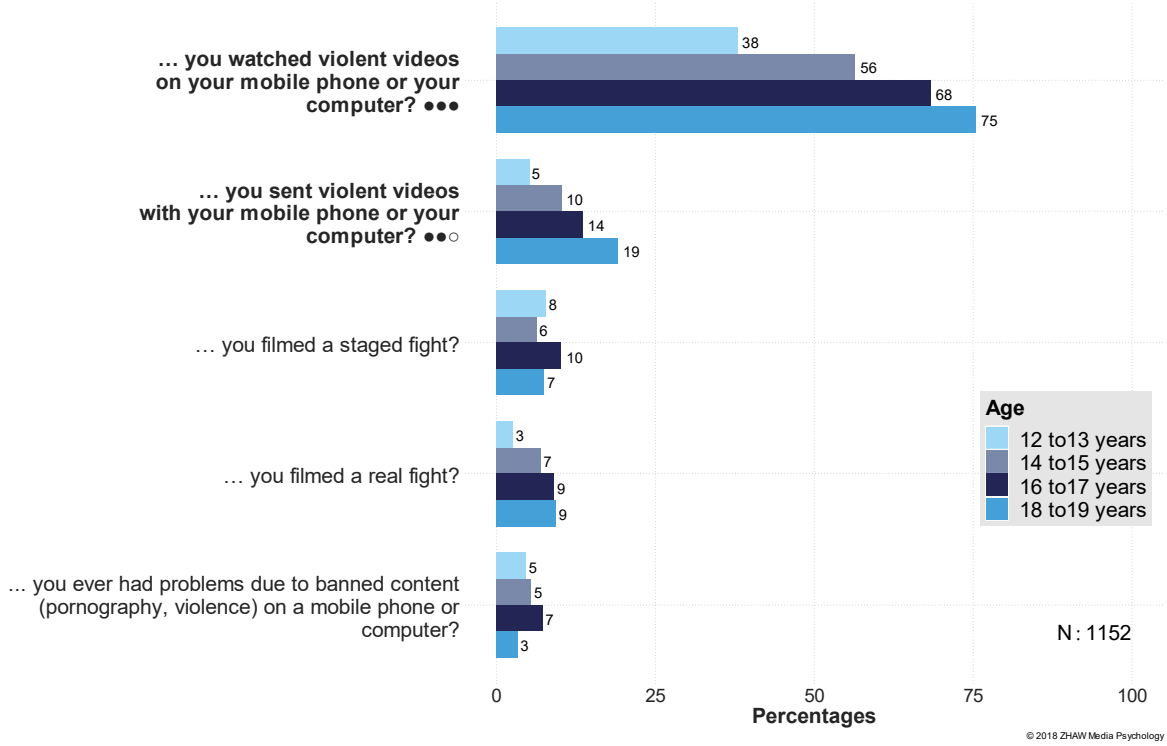

Illustration 50: Media violence according to age groups

As already seen in earlier surveys, clear **gender differences emerged regarding media violence** (see Illustration 51). Boys watch and send brutal films more often and film fights more often. They are also more likely to have problems due to prohibited content, though the effect here is marginal.

Has it ever happened that…

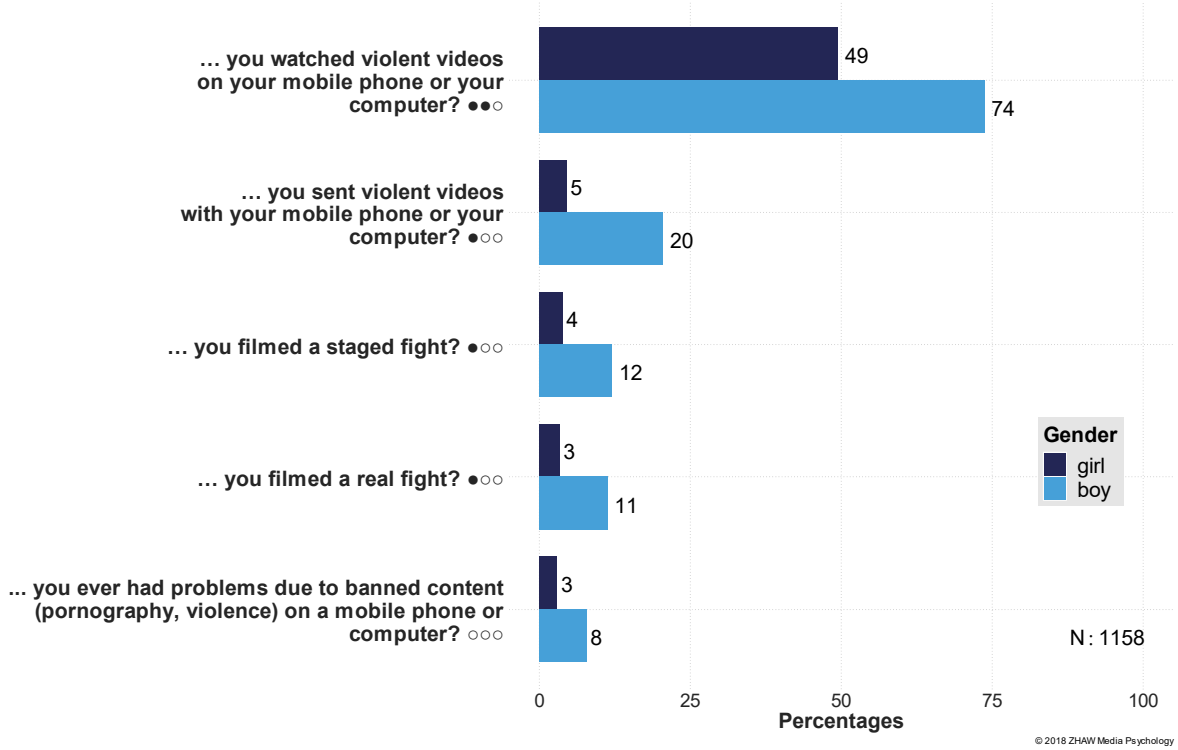

Illustration 51: Media violence according to gender

70 % of adolescents with a low **socio-economic status (SeS)** have already watched brutal videos on mobile phones or computers. This is significantly higher than adolescents with a high (62 %) or average SeS (59 %, small effect).

Compared **over time**, there have been no changes; the results have been stable since 2014.

9 Video games

About 70 % of Swiss adolescents indicate they play video games. Table 2 shows that there are hardly any differences regarding **regions, family background, school type** and **residential location.** However, with increasing **age**, fewer adolescents engage in gaming and as already shown in earlier surveys, far more **boys play computer games than girls.** Adolescents with an average **socio-economic status (SeS)** are more likely to participate in gaming than those with a low or high SeS. The results of the last survey cycles are also mapped as an overview in Table 2, but without any review of the significant differences; consequently, the values are to be interpreted with caution.

Table 2: Percentage of gamers

Feature		2018	2016	2014	2012	2010
Overall sample		70	74	74	68	74
Region	German-speaking	71	66	66	65	71
	Romandie	68	66	77	74	73
	Ticino	68	69	69	70	74
Age group	12-/13-year-olds	81	81	80	79	88
	14-/15-year-olds	76	72	77	76	83
	16-/17-year-olds	66	58	67	65	63
	18-/19-year-olds	62	63	55	52	64
Gender	Girls	48	42	51	50	57
	Boys	91	91	89	88	92
Socio-economic status	Low	65	66	68	68	69
	Medium	74	65	70	69	75
	High	65	70	67	66	73
Family background	Switzerland	68	66	68	68	72
	Foreign	79	62	71	63	73
School type (n=320)	Secondary I	78	77	79	80	80
	Secondary school	73	74	71	74	82
	Junior high school	84	71	73	72	80
Residential location/urban development	City/Agglomeration	72	70	68	66	74
	Rural area	69	75	71	69	72

9.1 Time spent using games

Adolescents in Switzerland each day spend just under an hour during the week and two hours at the weekend with gaming, if one considers the more stable measure of the central tendency, the median (see Table 3). **Boys** use games more intensively than **girls,** both on weekdays as well as at the weekend. Adolescents with a **migration background** game more intensively at the weekend than Swiss adolescents. Moreover, adolescents from families with a low SeS play computer games for longer on average during the week than adolescents with a high SeS.

Table 3: Self-estimated gaming duration

Gaming duration	Median	Average
on a weekday	50 mins	1 hr 23 min
on a day at the weekend	2 hrs	2 hr 48 min

9.2 Usage forms of games

The 785 adolescents surveyed in total were asked about various usage forms (see Illustration 52). 51 % of these adolescents participate in gaming daily or several times a week alone, 43 % with others online and 17 % with others in the same room. However, if one considers the information of daily to never in Illustration 52, there are large differences between the usage forms.

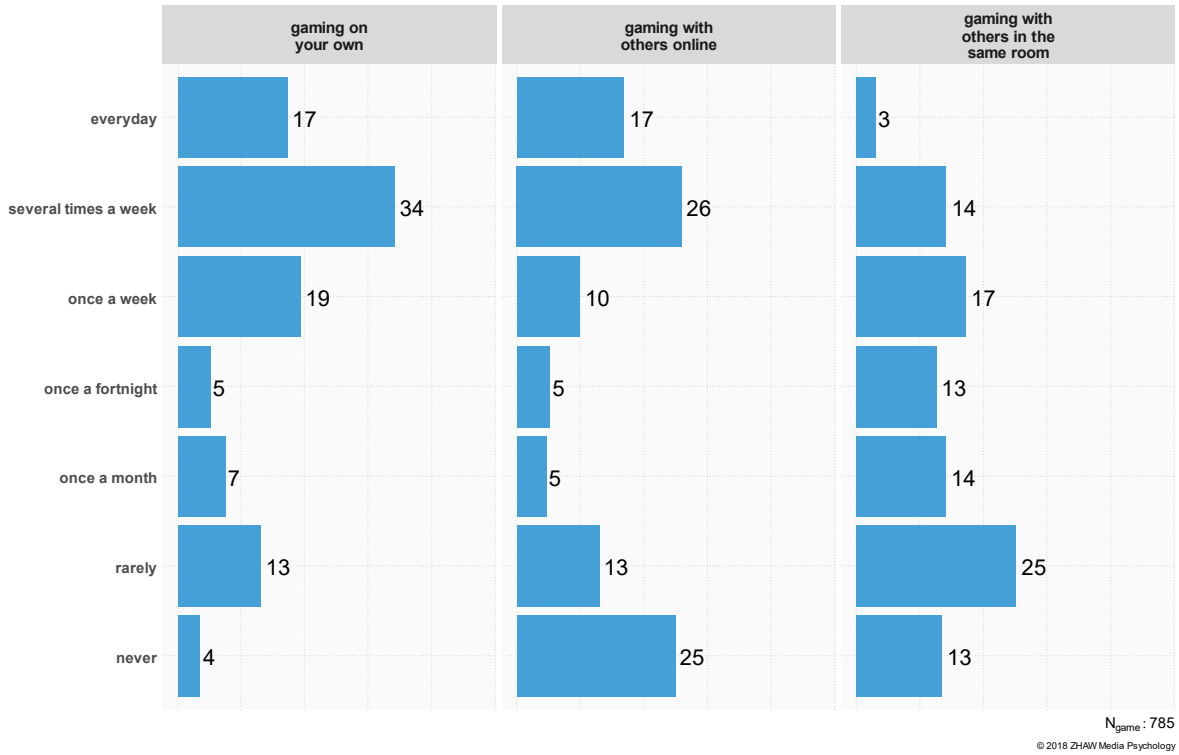

Illustration 52: Various usage forms of games

However, as in previous surveys, very clear **gender differences** emerge regarding the method of gaming: boys participate in gaming far more than girls (see Illustration 53). The biggest difference here is in online gaming with others. Girls game most frequently alone, whereas boys game almost as often alone as online.

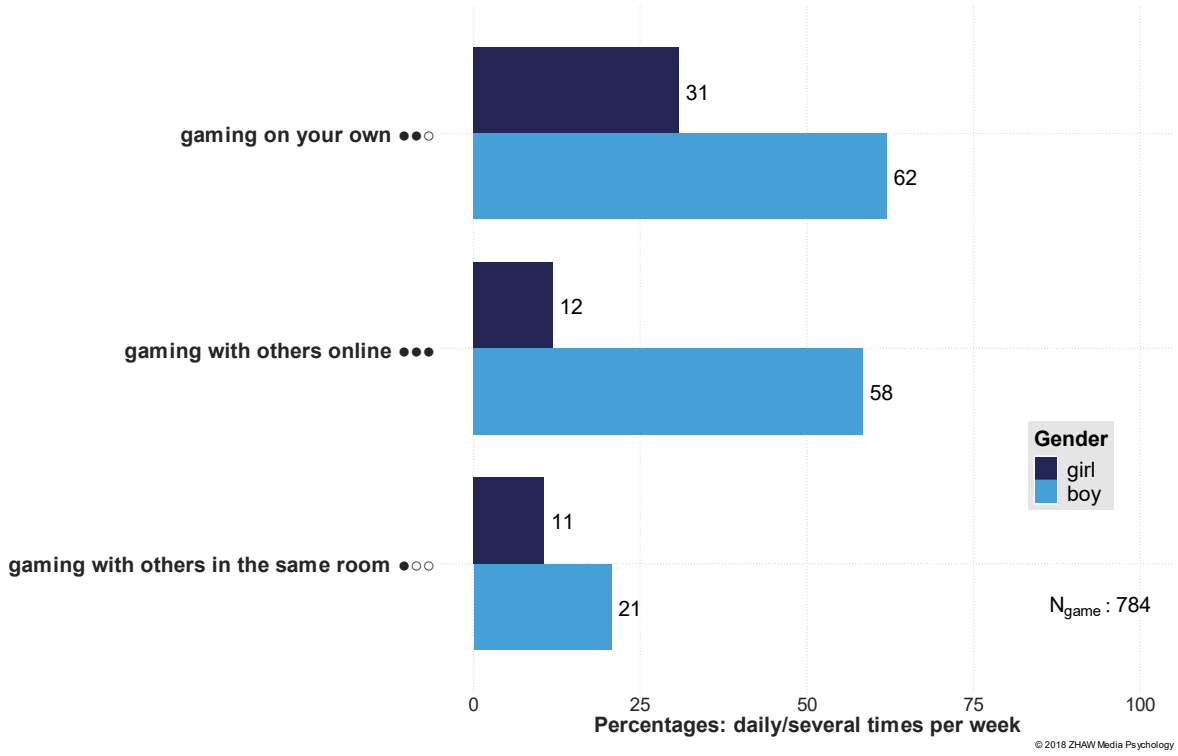

Illustration 53: Various usage forms of video games according to gender

There are no group differences regarding **family background, socio-economic status, regions** and **residential location**.

It is evident in connection with **school type** that adolescents who attend junior high school participate in gaming more often online with others (65 %) than those of the same age from secondary school (46 %) secondary I (35 %, medium effect).

Compared **over time**, there was a significant increase in online gaming with others between 2012 (28 %) and 2016 (43 %) (small effect); however, since 2016, the values here have remained stable.

70 % of adolescents who participate in gaming indicate they **have already played games for which they were actually too young**.
This proportion increases across the **age groups**, but declines once again slightly from the age of 18 (12-/13-year-olds: 59 %, 14-/15-year-olds: 72 %; 16-/17-year-olds: 76 %, 18-/19-year-olds: 72 %).
Among **girls**, 43 % of gamers claim to have already played games for which they were actually too young, among **boys** this was 84 % of gamers.

9.3 Favourite games

When asked about the three favourite games, *Fortnite* was mentioned by far the most often with 282 mentions (Nm.) (see Illustration 54). The football game *FIFA* is in second place for the favourite games with 184 mentions. *Grand Theft Auto* (GTA) with 136 mentions took third place, followed by *Call of Duty* with 116 mentions. Overall, there were 1’950 mentions. All games are presented in the word cloud that were mentioned at least five times.

Illustration 54: Favourite games

The proliferation of favourite games differs slightly among the **age groups**, although with the exception of the 18-/19-year-olds, *Fortnite* is the favourite in all age groups and *FIFA* comes in at second place. Among the 18-/19-year-olds, it is precisely the opposite. Among the 12-/13-year-olds *Minecraft* comes in third. This is the only age group in which this game is in the top 5.

Gender differences can also be detected. Girls made 527 mentions and boys 1422. The five most-mentioned favourite games of the boys are *Fortnite*, *FIFA*, *Grand Theft Auto (GTA)*, *Call of Duty (CoD)* and *Minecraft*. Among girls, *Fortnite* is also in first place, followed by *Grand Theft Auto* and *Super Mario*. *The Sims* is in fourth place and *Mario Kart* in fifth place.

In all three **regions**, *Fortnite* and *FIFA* are the two most popular games. In German-speaking Switzerland and the Romandie, *Grand Theft Auto* is in third place, in Ticino in fourth place. *Call of Duty* took third place in Ticino and is in fourth place in both regions.

Compared **over time**, (see Table 4), it is evident that *Call of Duty* has admittedly been in the top 5 since 2012, but over the years has continuously fallen back a little. *FIFA*, with the exception of 2016, was in each case in second place and *GTA* took third place during all surveys. In 2010, the favourite games were only evaluated at the genre level, consequently, the data from this survey period is not included in Table 4. In 2016, the sample structure was altered; since then, the information from the Romandie has been somewhat over-represented.

Table 4: Top 5 favourite games across all survey times since 2012

Rank	2018	2016	2014	2012
1st	Fortnite	FIFA	Call of Duty	Call of Duty
2nd	FIFA	Call of Duty	FIFA	FIFA
3rd	Grand Theft Auto	Grand Theft Auto	Grand Theft Auto	Grand Theft Auto
4th	Call of Duty	Minecraft	Battlefield	Battlefield
5th	Minecraft	League of Legends	Minecraft	Super Mario

Video games can be subdivided into different **genres** (Willemse, Genner, Waller, Suter & Süss, 2017). Table 5 assigns the favourite games mentioned to genres and lists them according to frequency. The most mentions can be found in relation to the genre "first- and third-person shooter games". This year's winner *Fortnite* is also in this category. To be more specific, the game is assigned to the sub-genre Battle Royale, to which other games mentioned such as *PlayerUnknown's Battlegrounds* or *Rules of Survival* belong. When it comes to the sub-genre Battle Royale, the goal is for a particular number of players (at the moment, usually about 100 players) to land at a self-determined location on an island, collect resources and try to exterminate the co-players. The last surviving individual player or the last team wins the game. Moreover, an artificial barrier ensures that the playing area becomes progressively smaller. Depending on the game, other game elements, such as building structures (e.g. *Fortnite*) or the use of vehicles (e.g. *PlayerUnknown's Battlegrounds*) are added. Sport games lie in second place with *FIFA* as the most popular representative. In the open world games, which are in third place, *Grand Theft Auto* (GTA) is the most frequently mentioned. The action adventure games and racing games come in fourth and fifth. The order in the ranking of the five most popular game genres has not changed since the last survey in 2016.

Table 5: Genre assignment of favourite games according to frequency of mentions

Genre	Examples	Frequency in %
First- and third-person shooter game	Fortnite, Call of Duty, Counter Strike	30
Sport game	FIFA, NHL, NBA	14
Open world game	GTA, Minecraft, Watch Dogs	13
Action adventure game	Assassin's Creed, Far Cry, Uncharted	6
Racing game	Need for Speed, Mario Kart, Gran Turismo	5
MOBA[1]	League of Legends, Clash Royale, Overwatch	5
Simulation game	The Sims, Hay Day, Animal Crossing	4
Jump 'n' Run/ Platform game	Super Mario, Temple Run, Subway Surfer	4
Role playing game	The Elder Scrolls, The Legend of Zelda	4
Puzzle game	Portal, Candy Crush	3
MMOG[2]	Clash of Clans, World of Warcraft, Clash Royale	3
Arcade game	Slither.io, Rider, Pac-Man	3
Beat 'em up game	Super Smash Bros., Naruto, Mortal Kombat	2
Strategy game	Age of Empires, Total War, Plants vs. Zombies	1
Music game	Just Dance, Piano Tiles	1
Survival horror game	The Last of Us, Dying Light	1
Trivia game	Fight List, Quizduell	1
Board/card game	Hearthstone: Heroes of Warcraft, Solitaire, Uno	<1

[1] Multiplayer Online Battle Arena
[2] Massive Multiplayer Online Games

10 Mobile phone / smartphone

Mobile phones accompany adolescents during their everyday lives, and the days when they were used merely to make telephone calls or write SMS are long gone. The following chapter describes various aspects of mobile phone use, such as mobile phone and subscription type, costs and use duration in more detail. In addition, it describes which mobile phone functions the adolescents use often and what their favourite apps are.

10.1 Mobile phone proliferation and mobile phone type

Mobile phone proliferation among adolescents has been at a consistently high level for years. In 2018, **99% of the adolescents had their own mobile phone.** Practically all devices are smartphones and only an infinitesimally small proportion of all those surveyed have a feature phone (0.1%).

There are hardly any differences between the various sub-groups regarding mobile phone proliferation. Only a marginal **age effect** can be determined: the 12-/13-year-olds own a mobile phone somewhat less often (97%) than the older adolescents (14-/15-year-olds: 99%, 16-/17-year-olds: 99%, 18-/19-year-olds: 100%).

10.2 Subscription type

For three-quarters of all of those surveyed (74%), the mobile phone costs incurred are covered by a subscription and only 20% use a prepaid card. 6% were unable to provide any information on this.

Compared to the previous years, the proportion of adolescents who have a subscription has hardly changed (2016: Subscription: 76%, prepaid: 20%, no information: 4%).
There are differences between the four **age groups** (see Table 6). The proportion of subscription owners increases with age, while an increasingly lower number of adolescents have a prepaid card. This age effect was already evident in previous years.

Table 6: Subscription vs. prepaid card according to age groups

Subscription/prepaid	12-/13-year-olds	14-/15-year-olds	16-/17-year-olds	18-/19-year-olds
Postpaid subscription	47%	66%	79%	94%
Prepaid card	35%	28%	19%	6%
Don't know	18%	6%	2%	0%

In the case of adolescents from families with a low **socio-economic status**, a smaller proportion has a prepaid card (14%) than in the case of adolescents from families with a higher socio-economic status (medium: 23%, high: 19%).

10.3 Monthly costs for the mobile telephone

The monthly costs of the adolescents amounted to CHF 37 on average in 2018 (see Illustration 55). As a result, monthly expenditure is on a similar scale to the previous years, after it had risen from CHF 35 to CHF 39 between 2012 and 2016.

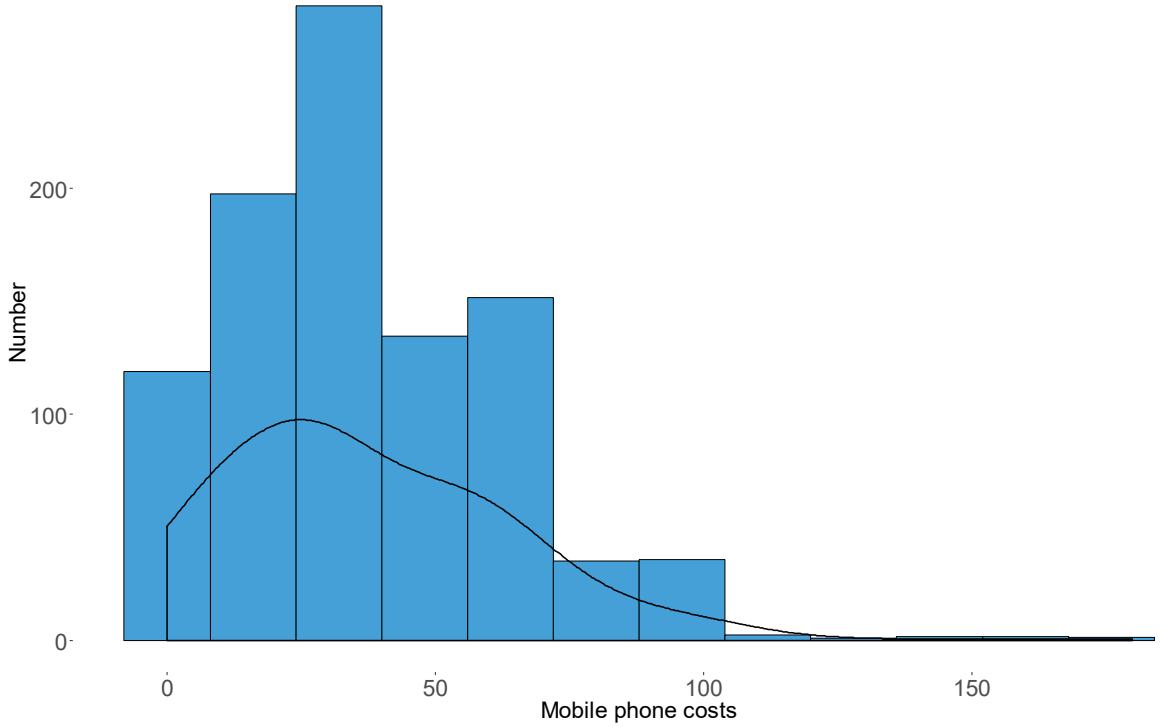

Illustration 55: Histogram of monthly mobile costs in CHF

Among adolescents in the Romandie, the mobile phones generate somewhat higher costs than in the two other **regions** (German-speaking Switzerland: CHF 36, Ticino: CHF 34).

Moreover, expenditure for mobile phone usage increases with **age** (see Table 7): While the mobile phone costs for the 12-/13-year-olds are CHF 22 a month, expenditure for the 18-/19-year-olds is around twice as high.

Table 7: Monthly mobile phone costs according to age groups

Monthly mobile phone costs in CHF	12-/13-year-olds	14-/15-year-olds	16-/17-year-olds	18-/19-year-olds
Total CHF	CHF 22	CHF 33	CHF 36	CHF 50
Of which they paid themselves	CHF 4	CHF 8	CHF 16	CHF 36

The **share of the mobile phone costs paid by themselves** is CHF 18 on average. With increasing **age**, the adolescents cover an increasing share of the costs themselves (see Table 7).

10.4 Usage duration of the mobile telephone

Almost all of those surveyed (99 %) claimed to use a mobile phone daily or several times a week (see chapter 5.3). In order to record in more detail how much time the adolescents spend on the mobile phone, they were asked to estimate their daily mobile phone use duration. The corresponding values are shown in Table 8. On **weekdays**, the adolescents use their mobile phone for **2.5 hours** on average (median), at the **weekend for about three hours.** At first glance, this represents a great change compared to 2016: two years ago, there was an average usage duration of three hours on weekdays and four hours at the weekend. However, on closer examination of these values, it emerged that these

changes were within the range of measurement fluctuations (confidence intervals of the median overlap), which means they are not significant.

Table 8: Self-estimated mobile phone usage duration

Mobile phone usage duration	Median	Average
On a weekday	2 hrs 30 min	3 hrs 18 min
On a day at the weekend	3 hrs 5 min	4 hrs 29 min

The **age** and **family background** of the adolescents are correlated with the mobile phone usage duration. Older adolescents spend more time on their mobile phones than the younger ones, and adolescents from families with a migration background use their mobile phones more intensively than those of the same age without migration background.

When interpreting the mobile phone usage duration, it must be borne in mind in general that this is self-reported data. Since it is difficult to evaluate one's own mobile phone usage in retrospect, a certain inaccuracy is to be expected. According to a current study (Boase & Ling, 2013), in the case of self-reported information on mobile phone usage, the actual usage duration is overestimated by up to 60 %. Accordingly, the values provided here are likely to be too high and must be interpreted with caution.

10.5 Mobile phone functions

The adolescents use their mobile phones for a very wide range of functions (see Illustration 56). All of the following analyses on the usage frequency of different mobile phone functions are based on the data of the 99 % of adolescents who own their own mobile phone.
Messengers are the most-used mobile phone function: 95 % of adolescents use a messenger at least several times a week (e.g. *WhatsApp*) to send personal messages, up to 88 % on a daily basis. Moreover, 89 % of adolescents regularly use the group-chat function. 93 % often use the mobile phone as a watch and 89 % of those surveyed listen to music at least several times a week or surf with their mobile phone on the Internet. 70 % of adolescents regularly use the mobile phone to make telephone calls. The SMS function is still used by almost half of those surveyed several times a week or more often.

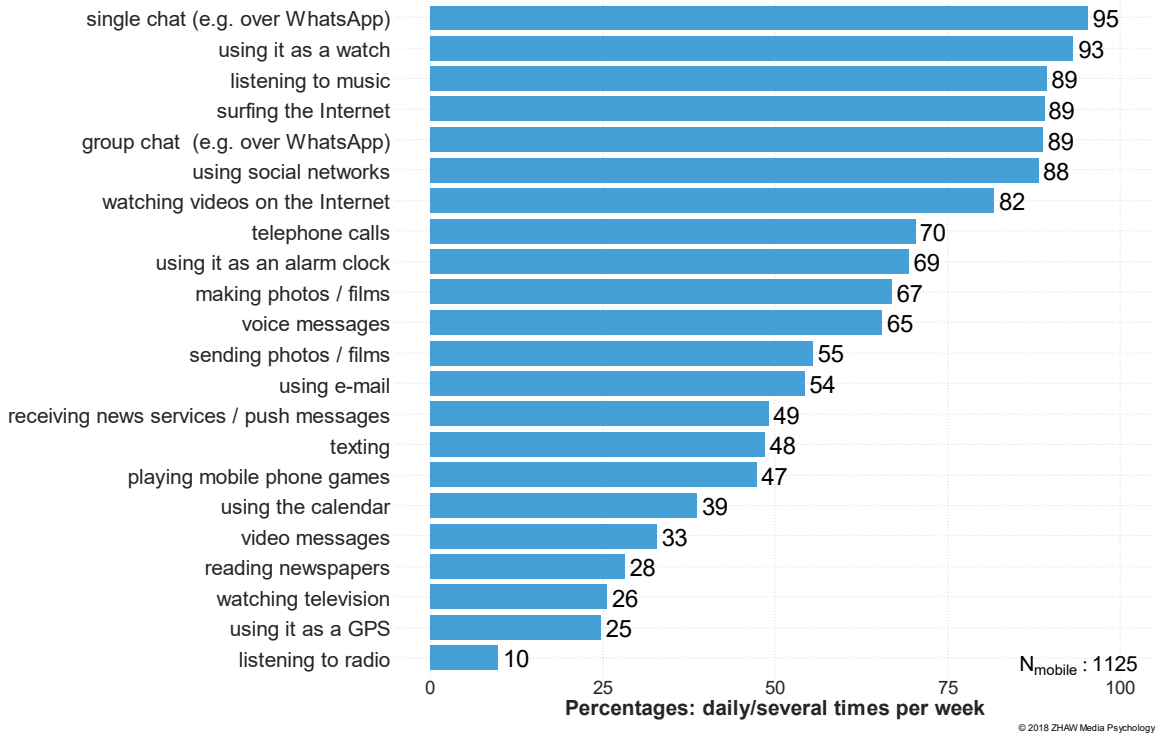

Illustration 56: Use of mobile phone functions

There are clear differences in mobile phone use between the four **age groups** (see Illustration 57). Most of the mobile phone functions tend to be used more with advancing age. Compared to the older adolescents surveyed, 12-/13-year-olds use the mobile phone less often to listen to music, surf the Internet, make photos or films or visit social networks. E-mails are received and sent less often by the 12-/13-year-olds and 14-/15-year-olds than by the older adolescents. In addition, as they get older, the adolescents use functions intended for organisation and planning, such as the alarm clock, agenda or navigation aids, more often. Information services, such as service messages/push messages and newspapers are used more regularly by the adolescents as they get older. An age effect in the opposite direction is only visible for mobile phone games: the older they get, the less the adolescents play on the mobile phone.

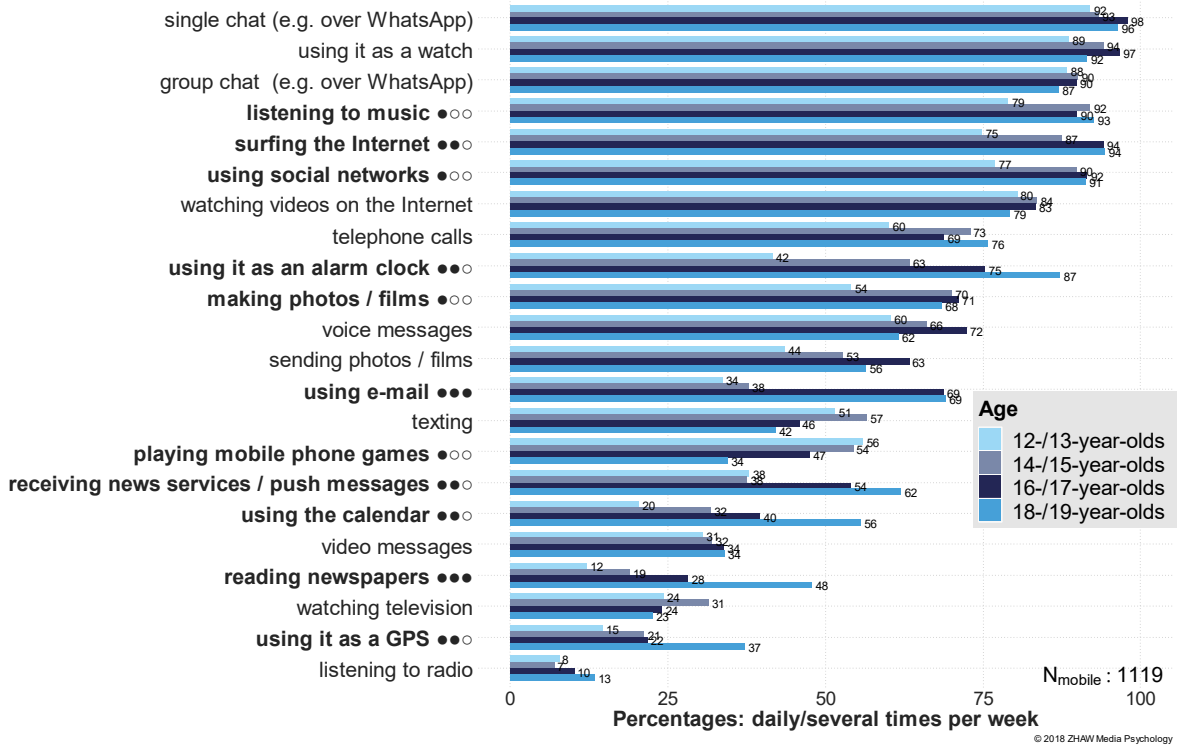

Illustration 57: Use of mobile phone functions according to age groups

There are also certain differences between **girls** and **boys** with regard to the usage frequency of various mobile phone functions. Girls use the mobile phone more regularly to make photos and films (girls: 73 %, boys: 61 %), to send or receive voice messages (girls: 71 %, boys: 59 %) and to visit social networks (girls: 91 %, boys: 85 %). Boys watch videos on mobile phones more often (boys: 88 %, girls: 76 %), make telephone calls more often (boys: 75 %, girls: 66 %) and use the GPS more regularly (boys: 29 %, girls: 20 %). All of the differences mentioned are based on small or marginal (using social networks, GPS) effects. However, the clearest gender difference is evident for playing on the mobile phone (medium effect): two-thirds of adolescents (62 %) use these mobile phone functions daily or several times a week, while only a third of girls (32 %) do this regularly.

Various mobile phone functions are used by adolescents from families with a **migration background** more frequently than by adolescents from Swiss families (see Illustration 58). The differences for using the watch, listening to music or watching videos on the Internet is statistically significant. Furthermore, certain mobile phone functions that are used for communication are used by adolescents with migration background more often, such as making telephone calls, sending photos and films and receiving and sending voice messages, video messages or SMS. Moreover, adolescents with foreign roots play games more often on the mobile phone, watch TV or use the GPS. All of the differences mentioned involved small or marginal effects.

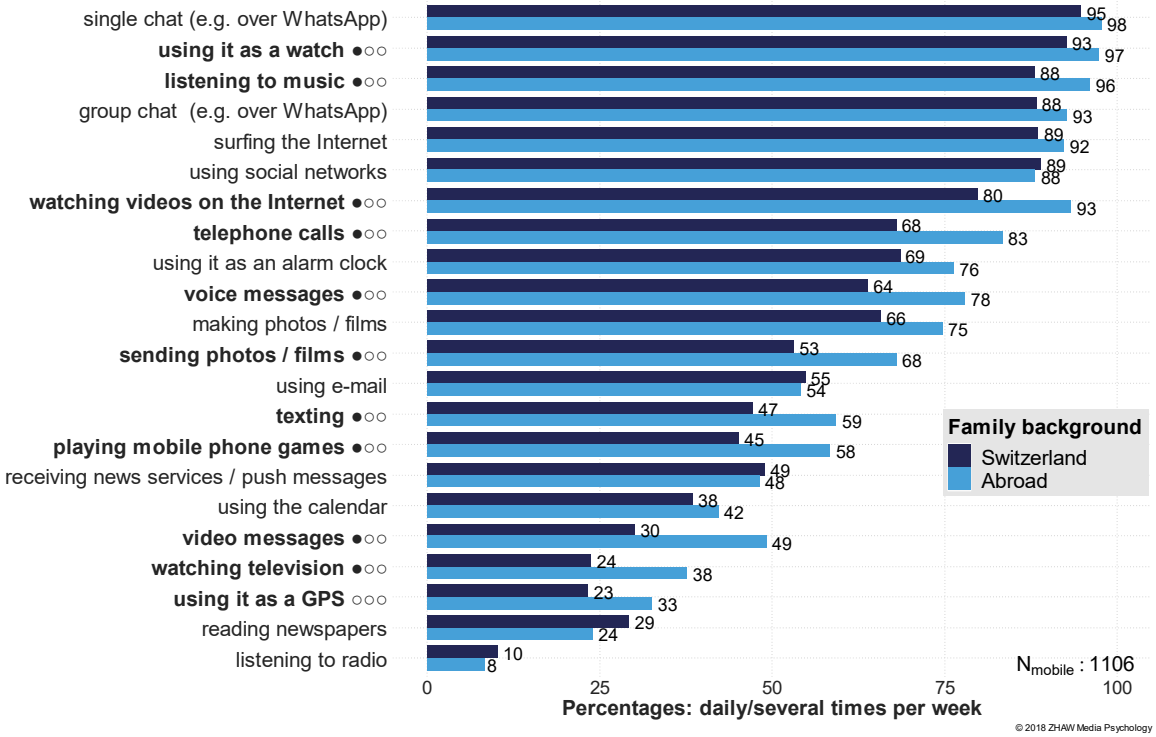

Illustration 58: Use of mobile phone functions according to family background

Adolescents from the various **regions** differ in their mobile phone usage most clearly with regard to the use of voice messages and SMS (in each case a medium effect). Adolescents from German-speaking Switzerland use these two means of communication less often (voice messages: 59 %, SMS: 37 %) than those of the same age from the Romandie (77 % or 73 %) and Ticino (86 % or 70 %). What's more, adolescents from German-speaking Switzerland make telephone calls less often (67 %) and send photos and films with their mobile phones less often (51 %) than those in the Romandie (76 % or 64 % respectively) and Ticino (81 % or 68 % respectively, in each case a small effect). In the Romandie, the proportion of adolescents who frequently use mobile phones as watches is somewhat higher (98 %) than in the two other regions (German-speaking Switzerland: 92 %, Ticino 90 %, small effect). A larger proportion of the Romandie adolescents also use video messages more regularly (46 %) than adolescents in Ticino (37 %) and German-speaking Switzerland (27 %, small effect). By contrast, the radio function is used least often by adolescents in the Romandie (Romandie: 6 %, German-speaking Switzerland: 11 %, Ticino: 11 %, marginal effect).

The **school type** correlates with the usage frequency of two mobile phone functions. Adolescents who attend a secondary I school listen to music on mobile phones less often (80 %) than those of the same age in secondary (89 %) and junior high schools (89 %, small effect). Junior high school pupils play mobile phone games more often (73 %) than adolescents with a higher formal educational level (secondary: 47 %, secondary I: 49 %, medium effect).

Depending on the **socio-economic status (SeS)**, there are three significant differences in mobile phone use. The higher the SeS of the family, the more often adolescents use a messenger group-chat function (high: 94 %, medium: 89 %, low: 84 %, small effect). Adolescents from families with a lower socio-economic status use mobile phones more often as alarm clocks (80 %) than those of the same age with a higher SeS (medium: 67 %, high: 67 %, small effect). GPS is used by adolescents with a high (29 %) and low SeS (31 %) more regularly than by those of the same age with a medium SeS (21 %, marginal effect).

Compared **over time** for the last six years, it is evident that the strong upward trend in the usage frequency of various mobile phone functions has not continued over the last two years, and the

proportion of regular users has remained constant at about 90 % (see Illustration 59). This applies to listening to music, surfing on the Internet and using social networks. Watching videos on the Internet has increased markedly in the last eight years. The significant increase in watching television goes back to 2014, when the increase was striking. The proportion of adolescents who use mobile phones to watch television has no longer increased in the last four years. There has been a slight increase in sending and receiving e-mails this year, but it is not statistically significant. There has been a clear downward trend in the use of SMS functions: While in 2012 93 % of all those surveyed still used SMS regularly, this function is only still used by just under half.

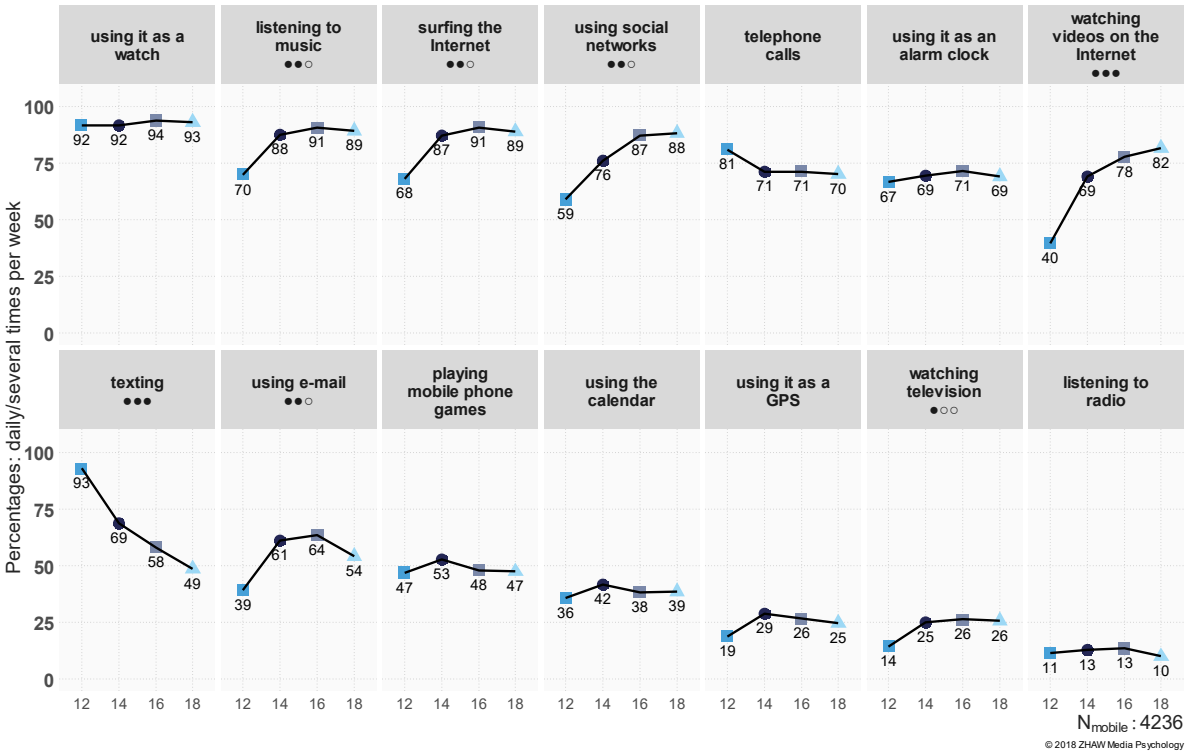

Illustration 59: Use of mobile phone functions over time 2012-2018

10.6 Favourite apps on smartphones

Apart from the usage frequency of various mobile phone functions, the adolescents were also asked in previous years about their three favourite apps (see Illustration 60). *Instagram* is the most popular app among adolescents with 741 mentions (Nm.). *WhatsApp*, the frontrunner of previous years with 671 mentions, is in second place, followed closely by *Snapchat* (608 Nm.). The *YouTube* app is in fourth place (359 Nm.). With far fewer mentions, the two streaming apps *Spotify* (65 Nm.) and *Netflix* (64 Nm.) follow in fifth and sixth place. *Facebook* is just behind them in seventh place (63 Nm.). All apps that were mentioned at least five times are presented in Illustration 60.

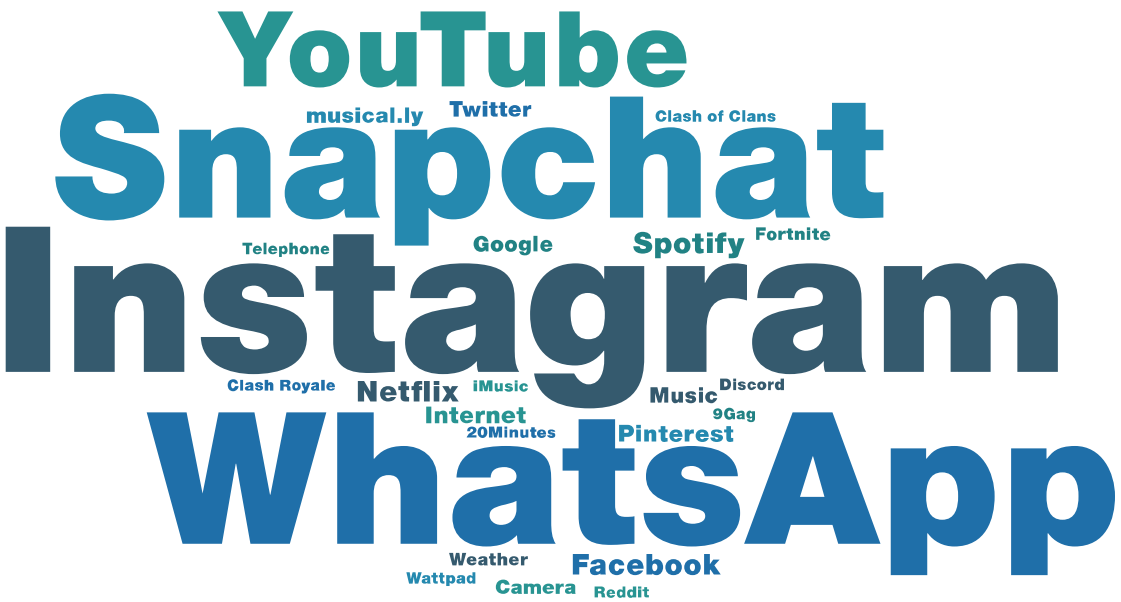

Illustration 60: Favourite apps

11 Summary and conclusions

Based on analyses of all of the subject areas, the following **trends** and **core points** can be shown regarding the non-media and media-related leisure behaviour of adolescents in Switzerland.

Change in non-media leisure activities: There have been changes in non-media leisure activities for the first time since the surveys began. Compared to 2010, adolescents engage in activities with their families more often, but meet friends less often. This is in line with the rising social trend of returning to domestic private life (cocooning). It remains to be seen whether this trend will continue.

Flat-rate streaming: A third of all adolescents in each case have a music-streaming subscription à la *Spotify* or a film-/series-streaming subscription like *Netflix*. As a result, the proliferation of these two subscription types has more than doubled in the last two years. Such streaming services are more widely available in households than they were in 2016: today, over half of the households have a film-/series-streaming subscription and a music-streaming subscription. The popularity of the streaming platform *Netflix* is also evident in the question about the most popular series. Here, *La casa de papel,* (English: *Money Heist*) a Spanish production that has now been continued by *Netflix*, is the undisputed leader. Of the ten most popular series, seven can be found among the *Netflix* programs. When it comes to media entertainment, there has been a change towards flat-rate streaming subscriptions, away from physical carrier media, such as CDs and DVDs and their players, such as CD and DVD players. Players for downloaded media data (e.g. MP3 players) are also falling in relevance. Flat-rate streaming subscriptions guarantee consumers access to a virtually unlimited range of titles. Moreover, additional titles are proposed algorithmically on the basis of usage, which can widen the range of available content. Only the future will show how this entertainment cornucopia will affect the behaviour of individuals.

***Instagram*, *WhatsApp* and *Snapchat* as must-haves:** these three communication services are the most popular among adolescents. Almost all of those surveyed have an account with *Instagram* or *Snapchat*. The majority use these services several times a day. In addition, almost one hundred percent of adolescents regularly use a messenger like *WhatsApp*. In contrast, the use of *Facebook* has declined: whereas in 2014 almost four-fifths of the adolescents spent time at least several times a week on *Facebook*, currently only about a fifth do this. The older the adolescents are, the more likely they are to still use *Facebook* regularly.

Withdrawal to semi-public spaces: Adolescents behave with restraint in social networks and reveal little about themselves publicly. Photos, videos or texts are watched and liked most frequently. Chatting or writing personal messages within networks is also popular. In contrast, fewer than half of adolescents regularly post contributions of their own. Posting of time-limited contributions (e.g. snaps or stories) and contributions for an explicitly selected audience are clearly more common than posting non-time-restricted or publicly visible contributions. Services like *Snapchat* and *Instagram* support the publication of texts and pictures for a limited period of time (e.g. snaps that can only be viewed once; stories that disappear after 24 hours). A withdrawal to the semi-public digital spaces of *WhatsApp* and *Snapchat* appears to be in progress. This is in line with the fact that three-quarters of the adolescents have activated settings in social networks that ensure that certain photos/videos are only visible for particular contacts. By contrast, only about a third of all those surveyed worry about the undesired visibility of personal information.

Tablet proliferation stagnating: Eight of ten households possess a tablet. After a strong upward trend between 2012 and 2016, the proliferation over the last two years appears to have reached a saturation point. The picture is similar for adolescents own possession. An upward trend was also evident here in recent years, but which has not continued since 2016. Today, about a third of adolescents own their own tablet. Currently, a series of schools are relying to an increasing extent on the tablet. It remains to be seen whether this will also affect the proliferation of these devices in households or among adolescents.

***Fortnite* is the most popular game:** games belong to the most popular media activities of adolescents. Adolescents play games on their own as well as with friends. As before, clearly more boys than girls game, and the share of gamers decreases as their age increases. *Fortnite* became the most popular game of adolescents in Switzerland only a few months after its release - irrespective of age and gender - and as a result has drawn attention to the sub-genre battle royale. The game can be played across many platforms, which also promotes its proliferation. Whether the *Fortnite* phenomenon will continue in future will become apparent in the next few years. The proliferation of portable game consoles has declined in the last four years. These have been replaced in many places by smartphones or tablets. In contrast, so-called game flat-rate subscriptions *(e.g. Playstation Now*, *Xbox Game Pass*), which permit unlimited gaming with selected games, have become increasingly prominent. They already exist in a third of households and 23 % of adolescents have their own subscription.

Entertainment and information behaviour: For entertainment, adolescents above all use social networks and video portals regularly, such as *YouTube*. To gather information on the Internet, search engines like *Google* are primarily used. Newspapers and magazines continue on a downward trend. In recent years, their use by adolescents has become increasingly uncommon - irrespective of whether in print or online. In contrast, over a quarter claimed to read a newspaper several times a week on their mobile phone.

Other summarised thoughts per subject area

Most popular leisure activities
The diversity of the answers of the adolescents showed that they pursue a wide range of interests and activities in their leisure time. It has become clear in general that adolescents tend to prefer media activities when they are alone and that non-media-related leisure activities are gaining in importance with regard to joint activities. Gaming is an exception here, which is among the favourites in relation to leisure activities when alone as well as with friends. Sport can be regarded as the non-media counterpart to gaming, since it is one of the most popular leisure activities, which adolescents pursue when they are alone as well as with friends.

It is interesting to note that compared to 2014 (in 2016 leisure preferences were not surveyed), there are far fewer mentions in the category "Partying". To make up for this, twice as many mentions were made this year in the category "Going out". This means there has been a change in 'going out' behaviour. Joint "chilling outside" is preferred to going to a club. One reason for this could be the high admission and beverage prices in clubs as well as the enforcement of age limits at entrance doors. If clubs are strict in only permitting admission at 18 or even 21, adolescents look for alternatives. They organise themselves via social media, go out spontaneously, buy drinks at garages and consume them outside, weather permitting. Another reason is also changes regarding health behaviour. A healthy, sporty lifestyle is more important today to many adolescents, which is hard to reconcile with drinking all night without sleep and listening to loud music.

Non-media leisure activities
Despite the increasingly strong growth in media devices and offerings, non-media activities play a central role in adolescents' leisure time. The most common activities have been stable with the exception of the above-described activities. Even if a slight decline is observable, a large proportion of the adolescents still get together regularly with friends; sport is actively pursued. As in previous studies, there are differences in the non-media activities between the different groups; those between the genders are the clearest. For example, more boys meet friends regularly than girls do. Boys also do sport more regularly than girls, and the difference is very clear. In contrast, girls look after their pets more regularly. Creative activities, like painting/handicrafts or making music, are pursued more regularly by girls than by boys. Most of these differences could also be identified in the last JAMES Study from 2016. Only the difference regarding making music is new.

Device availability
Device availability remains high, both in households as well as in relation to the personal ownership by the adolescents. The higher the socio-economic status (SeS) of a family, the more devices are available to the adolescents. Boys tend to have more devices of their own than girls. The change towards increased flat-rate streaming consumption and its consequences were discussed at the beginning of this section. With regard to device coverage, it is astonishing that compared to 2012 and 2014, fewer adolescents claim to have their own Internet access. This finding may be due to technical changes: most households today have wireless Internet, which can be accessed from all rooms. Moreover, many adolescents are constantly connected with the Internet via their mobile phone and use online functions throughout the day. As a result, "access" to the Internet has become less tangible and is taken for granted.

Media use of adolescents is dominated in particular by mobile phone and Internet use; almost all adolescents use mobile phones and the Internet daily. Moreover, the vast majority uses social networks, watches videos on the Internet or listens to music at least several times a week. Music is inseparable from adolescents' everyday life: for years, listening to music has been part of all adolescents' everyday life. The differences between the three language regions are especially striking with regard to musical preferences. Only *Ed Sheeran, Imagine Dragons* and *AC/DC* are among the ten most popular artists in all three regions. Otherwise, bands or musicians are especially popular who sing in the respective language of the three language regions. There is a particularly clear, general difference in the playing of video games. Two-thirds of boys participate in gaming daily or several times a week, whereas only every tenth girl does so. Increasingly fewer adolescents read newspapers regularly, whether online or on paper. Smartwatches and fitness trackers are not (yet) a mass phenomenon among adolescents: only a small proportion of the adolescents use a smartwatch, boys more often than girls. Fitness bracelets or step counters are used by a quarter, although only half of them use them once a week or more often.

Internet
Only a small proportion of the adolescents make an active contribution to the Internet. Photos or videos are most commonly posted on the Internet: every tenth claims to upload photos or videos daily or several times a week. If one compares this value with the information on posts in social networks, then this corresponds to posting contributions that are available without a time limit or are *publicly* visible. Posting time-limited contributions and contributions for a selected audience (e.g. snaps or *Instagram* stories) is stated more frequently by adolescents, which means this is apparently not perceived as "uploading something to the Internet". Overall, the Internet usage time during the week has remained constant at two hours and 30 minutes on average (median) since 2016.

Mobile phone
Mobile phones accompany the adolescents during their everyday life and are used for a wide range of different communication tasks. Messenger apps, above all *WhatsApp*, are used primarily for this. Almost all adolescents use a corresponding app daily. In addition to this, the mobile phone is used primarily for entertainment purposes, e.g. to listen to music, surf the Internet, visit social networks or watch videos. In addition, as they get older, adolescents make more regular use of functions intended for organisation and planning (e.g. alarm clock, agenda, GPS) or information (e.g. push messages, newspapers). On average, adolescents use their mobile phones for two-and-a-half hours daily. As they get older, with the increased use of various functions, the time spent on the mobile phone also increases. An age effect in the opposite direction is only visible for mobile phone games: the older they get, the less often the adolescents play games on the mobile phone. The family background of adolescents also correlates with mobile phone usage; adolescents from families with a migration background make more intensive use of their mobile phones than those of the same age with a Swiss family background. The basic data of mobile phone usage has changed little compared to 2016. Compared over time for the last six years, it is evident that the strong upward trend that was visible for a while in relation to the usage frequency of various mobile phone functions has not continued over the last two years, and the proportion of regular

users has remained constant. This applies to listening to music, surfing the Internet and using social networks.

Social networks
Apart from the above-mentioned withdrawal to semi-public digital spaces, the following finding is striking in the social networks: adolescents often have accounts in several networks, but never actually use the network. Such "dead accounts" must be taken into account when interpreting member numbers in social networks: up to a fifth of the accounts are no longer actively used at all. For example, this applies among adolescents in particular to *musical.ly* (since August it has operated under the name of *TikTok*). Adolescents with a higher formal educational level are registered less frequently in different social networks. Most of the adolescents behave with communicative restraint in the publicly visible area of social networks and are rather passive users.

Problematic aspects of media use
Just under half of the adolescents have got to know a stranger on the Internet at least once**.** The circumstances of these meetings were not the subject of this survey, therefore no assessment can be made as to whether this involved risky behaviour. Particularly in the case of older adolescents, such meetings can occur for dating purposes or as part of LAN parties, in order to participate in gaming together. Irrespective of such circumstances, a certain amount of caution is always advisable during the first meeting of an Internet acquaintance, and it should take place in a controlled public space. Moreover, in the case of adolescents under 16, they should be accompanied by an adult they know.

Almost a quarter of those surveyed claim to have been attacked at least once online. Such incidents can in general be described as **cybermobbing/bullying**. The frequency with which this phenomenon occurs hardly differs across the subgroups investigated and no specific risk group can be identified. Adolescents with all kinds of backgrounds are affected by cybermobbing/bullying, and children as young as 12 years have already experienced it. Accordingly, it is important that the preventive work related to cybermobbing/bullying already begin in primary school.

Cybergrooming describes the targeted approach of people on the Internet with the intention of initiating sexual contact. A third of adolescents has already been confronted at least once with such a situation. About half of 18- and 19-year-olds have already experienced cybergrooming, but 12-year-olds are also affected by it. Moreover, it is alarming that **cybergrooming** has also significantly increased over the last four years. Therefore, educational work should be performed early on and support offered to the adolescents in handling such contact offers.

Viewing and forwarding of both **media violence** and **erotic and pornographic content** increase as the adolescents get older. Boys make far more intensive use of both kinds of content than girls. Only in the sending of sexting messages are there no gender differences. There have been no changes compared to 2014 in the case of media violence and pornography.

Video games
Seven out of ten adolescents in Switzerland claim to play video games, though the proportion of boys is much higher than that of girls. On average, those surveyed participate in gaming about one hour a day (median). *Fortnite* is the most popular game among girls and boys; however, in the case of other titles there are clearly divergent gender preferences. For example, girls stated more often that *Super Mario*, *The Sims* and *Mario Kart* were their favourite games. Among boys, *FIFA*, *Grand Theft Auto* and *Call of Duty* are especially popular. Boys prefer the first- and third-person shooter genre and open world games, while there are other genres present among the most popular five video games among girls. Seven out of ten of those surveyed have ignored age information at least once and played games for which they were actually too young. From this, one can conclude that they are very well aware of the age information - perhaps more than their parents - and that they in part ignore it.

12 Further reading

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Composed by the authors of the JAMES Study:

Advice booklet on MEDIA LITERACY by the ZHAW and the Federal program „Youth and Media“ with „Tips for the safe use of digital media for parents and everyone dealing with children“ (in German only).

Children and adolescents are growing up in a world of media diversity. Parents and teachers often feel uncertain or out of their depth and wonder: how much media time and what media content is good for children? What is to be done in the event of cybermobbing/bullying or online addiction?
The MEDIENKOMPETENZ (media literacy) guide of the Media Psychology Research Team of the ZHAW collects frequently asked questions of parents and other people the children and adolescents know and answers them on a scientific basis. The guide is a completely revised version of the ZHAW brochure "FAQ Medienkompetenz – Häufig gestellte Fragen zu Chancen und Risiken von Medien" (FAQ media expertise - frequently asked questions about the opportunities and risks of media)" and has been published since 2013 together with the "Jugend und Medien" (youth and media) national platform of the Federal Department of Home Affairs.

Order for free as a brochure or **PDF**- Download the 6th edition in German, French and Italian at www.jugendundmedien.ch and www.zhaw.ch/psychologie/medienkompetenz. The associated **flyer** with the ten golden rules of media education is available in 16 languages

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