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Digital Uses, Victimization and Online Aggression: A Comparative Study Between Primary School and Lower Secondary School Students in France

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Abstract With the growing use of electronic communication among children and adolescents, the Internet has become an important tool for their socialization and has opened up new perspectives for network and community building opportunities. However, the Internet and electronic communication tools can be used either positively or negatively and the spread of its use in these recent years has led to online risky behaviours and harm. This questionnaire survey was completed in five primary schools and seven lower secondary schools in the South of France. It sets out to assess the digital uses, risk taking and negative experiences online among primary and secondary school students in France ($N=4200$). Findings show that primary school students are pretty well involved in digital communication since they spend an average of 150 min per day online vs. 190 for secondary school participants. Social networking is also part of their lives with 17 % of primary school children and 50 % secondary school students who use Facebook. In terms of risk taking, only 49 % of primary students and 39 % of secondary school students report they personally know all their online friends. Cyberbullying figures show that quite a few respondents have been affected with negative experiences among which some were repeatedly victimized (14 % in primary schools and 5 % in secondary schools). These findings highlight the necessity to take the issue of educating towards a positive and safe use of the Internet seriously and that primary school children also need to be provided with proper guidance towards a safer Internet.

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Introduction

Communication through electronic devices is worldwide spread. At the same time as it has opened up new opportunities and made the development of new skills possible, it has generated new types of anti-social behaviours and aggressions (Lenhart et al. 2011; Völlink et al. 2013), that most researchers call under the umbrella term of cyberbullying (Smith et al. 2008; Hinduja and Patchin 2009; Card 2013). The issue has received extensive attention due to the health-related problems in terms of anxiety, depression and suicidal ideation (Ybarra et al. 2007; Patchin and Hinduja 2012; Campbell et al. 2013) but also school academic achievement and dropout (Beran and Li 2007; Ybarra et al. 2007; Thornberg 2011) and the long-term social difficulties the victims suffer (Juvonen and Gross 2008). It has been widely investigated since the beginning of the year 2000.

However, the prevalence of cyberbullying varies widely from one place to the other, which can be explained by differences in methods, conceptualization of the phenomenon and measurements (Menesini et al. 2012). The first challenge relates to the definition of what cyberbullying is. According to Hinduja & Patchin (2009: 5), it is the "wilful and repeated harm inflicted through the use of computers, cell phones or other electronic devices". Smith, Steffgen & Sittichai (2013:3) define it as "bullying and harassment of others by means of new electronic technologies, primarily mobile phones and the Internet". Others, consider that cyberbullying does not need to be a repeated victimization due to the extremely negative effects it can have on the victim with a single event and the possible dissemination by others than the perpetrator(s), (Willard 2003; Smith 2011). Blaya (2013: 25 considers that cyberbullying is bullying by means of electronical devices and thus includes the idea of repetition while cyberviolence refers to single online events. Other discrepancies such as the frequency of victimization and its duration set the same definitional issues as for traditional bullying and make comparisons difficult. Results also vary according to the cyberbullying behaviours that are surveyed and the medium used (sexting, instant messaging, SNS, etc.). Willard (2007), highlights there are nine different forms of cyberbullying that are: flaming[1]; denigration, exclusion, outing, trickery,[2] impersonation,[3] stalking,[4] threats and harassment. This paper sets out to present the findings of a survey that was completed in five primary schools and seven lower secondary schools in the South of France. It explores and compares the digital uses, risk taking, online victimization and aggression between primary and secondary school children as

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[1] Flaming refers to sending nasty messages using vulgar and angry language as part of an intense argument in chat rooms, instant messages or emails.
[2] Outing and trickery are sharing someone's secret or privacy online.
[3] Impersonation: breaking into someone's account and pretending to be that person to send messages to make her/him look bad, get in trouble, break friendship and socially isolate her/him or damage her/his reputation.
[4] Stalking is the sending of messages repeatedly to intimidate and make the target worried for her or his safety. These messages can be explicitly threatening.

well as the potential overlap between traditional and online victimization and anti-social behaviours (Hemphill et al. 2012).

Theoretical Background

Digital Uses and Risk Taking of the Young People

The young people grow up in a world of media and technological communication tools. The development of handheld devices and mainly tablets (which are their "favourite" as shown by Mascheroni and Olafsson 2014) contributes to the development of their online activities, mainly games such as Moshy Monsters, Moviestarplanet, Clash of Clans. The Pew 2012 survey for the United States reveals that 95 % of all teens aged 12–17 are active online and that 78 % have a mobile phone among which half of them have a smartphone; 81 % of the teenagers who go online use social media. According to the Ofcom 2013 report (2013, p.20), in the U.K., one third of the children aged 3–4 get online through tablets, that is to say twice as much as in 2012. The 2014 Ofcom report highlights that 2 % of the 3 to 4-year-olds have an active social network.

In France, a first study about the digital uses of primary school children (Kredens and Fontar 2010) reveals that 8 years old children connected weekly (51,1 %) and even daily (26,4 %). The Eu Kids Online report for France (Blaya and Alava 2012) indicates similar results with one child out of four who reported going on the Internet at least everyday and over half of the 11–12 years old respondents. Although social networks (SNS) are not legally allowed under the age of 13,[5] 13 % of the 9–10 years old and 37 % of the 11–12 years old stated they had a SNS profile. This confirms some previous survey from Simon and Duhautois (2011) according to which 18 % of the children below the age of 13 were part of a Social Network and one child out of ten in primary school.

According to Ofcom (2014), Facebook is still leader in the teenage online market with 97 % of the 12–15 years old (three times more than any other application), followed by Instagram that is used by 36 % of the young people.[6] However other applications such as Twitter, Snapchat and Whatsapp are rising in popularity. The most active teenagers are the 14–15 year-olds. Still, about 30 % of the 9–10 year-olds use their laptop daily, 18 % use their tablets daily and 13 % use their smartphone every day (Mascheroni and Cuman 2014). The use of mobile phones (mainly smartphones) and handheld communication devices by the young people produces some changes in communication and facilitates anytime access to the various applications. As a matter of fact as the Children Go Mobile study shows the young people are more likely to use smartphones and laptops (equally) than desktop computers. Using a telephone to talk is less part of the habits of the young generations, most of their communications being on instant messaging and social networks (Mascheroni and Cuman 2014). This represents a risk since social networks are positively associated to online victimization (Sengupta and Chaudhuri 2011). Still according to this survey, smartphones are mainly used

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[5] SNS and notably Facebook are not allowed under the age of 13 in compliance with the COPPA (Children's Online Privacy Protection Act — 1998) and the National Commission « Informatique et Libertés », www.jeunes.cnil.fr

[6] For the purpose of this paper, the use of « young people » refers to any child under the age of 18.

at home and the authors suggest that they are specifically valued for the privacy and convenience they offer rather than mobility. The rise of the number of primary school children who are online and use social media daily (Holloway et al. 2014), shows that this part of the population should be granted our strongest attention due to the possible risks they take.

Cyberbullying

Research on the involvement of secondary school children into bullying, either as victims or as perpetrators started in the early 2000s. Since then a whole spate of research was developed. The assessment of the prevalence of the issue shows some great differences between the different surveys, due to methods, sampling and definition variations. A review by Tokunaga concludes that the rates of cyberbullying range from 20 to 40 % (Tokunaga 2010). Another review by Patchin and Hinduja (2012) shows victimization rates from 5.5 to 72 % and self-reporting engagement rates from 3 to 44 %. The one survey that studied cyberbullying using the same method in 28 different countries, that is the Eu Kids Online survey (Livingstone et al. 2011), reports that 6 % of the surveyed young people were cyberbullied and that the main medium is mobile phone. According to this research, the countries where cyberbullying is most common are also the ones where traditional bullying is high, which highlights the association between traditional and online anti-social behaviours. As shown by Calvete et al. (2010) the young people who live in an aggressive or violent environment are more likely to become cyberaggressors and the ones who are bullies offline are more at risk to adopt similar behaviour online. In France, research shows the same percentage as for the average one in Europe, that is 6 % (Livingstone et al. 2011) and the most reported types of victimization are also nasty messages on mobile phones with higher percentages than for the whole European sample (5 vs. 3 %), (Blaya and Alava 2012). However, a more recent research (Blaya 2013) including 3200 11–16 years old participants shows that 42 % of the participants were victims of cyberviolence, that is to say occasional online violence and 6 % were cyberbullied. Self-reported perpetrators amount to 32 and 7 % for cyberbullying. According to this survey, over one child out of five is both victim/author, victims becoming often aggressors because of retaliation. Little is known about the involvement of primary school children, as the majority of studies on cyberbullying have focused on teenagers only. A first study in the U.S. by Keith and Martin (2004) among a sample of 1566 pupils aged 9–13, revealed that 25 % of the respondents were victims of cyberbullying and 7 % of severe cyberbullying (at least once a week during the last 6 months). The main reported aggressions were online threats (35 %) and one child out of two admitted having aggressed someone once while one out of three several times. McLoughlin et al. (2009) surveyed 7–10 years old students ($N=349$) and reports that 22 % were online victims and 13 % were cyberbullied, most of the victims were targeted by someone from their school (71 %). Some more recent research was developed due to the increase in the use of electronic devices by very young children (Holloway et al. 2014). In Europe, the EU Kids Online survey by Livingstone and her colleagues (2011) stresses that children under the age of 11 are less involved in cyberbullying because their online activities are mainly performed with a parent nearby or with stronger supervision. However, some more recent findings show that young children can be rather heavily submitted to negative experiences. In the United States, DePaolis and Williford (2014) explored the exposure of 660 3rd–5th grade students in six primary schools to traditional and cyberbullying victimization. Results indicate that 17.7 % of the children were cyberbullied predominantly through online games and that online victims were also victims of traditional bullying. A study by Monks

et al. (2012), of a sample of students aged 7–11, revealed that they are affected by cyberbullying with 21 % of the participants who were victimized at least once during the school year and 5 % who admit cyberbullying others. They also show evidence of a significant association between cyberbullying and traditional bullying.

Whatever the lack of consensus and varieties on the percentages of children who were victims or perpetrators of cyberbullying, findings show that cyberbullying affects many young people. However, little research has tried to compare the differences of such experiences between primary and secondary school students. This is the purpose of this paper, the starting hypothesis being that due to a greater use of the Internet by teenagers (Livingstone et al. 2011; Blaya 2013), we should expect them to be more involved in cyberviolence and cyberbullying.

The present study is part of an intervention project to prevent online risk taking and cyberviolence. The students completed an online self-report questionnaire of harm assessment and we present the findings in this paper.

Method

Sample

For the purpose of this research, we surveyed 4200 pupils from 12 schools (five primary schools and seven secondary schools). The schools were located in the South of France and were approached to take part in the survey. The sample is a convenience sample, that is that only the schools, which accepted to take part were included although we had contacted 20 and only the students who accepted to be involved completed the questionnaire (All the students from the participating schools accepted to fill the questionnaire in and we had no refusal on the part of families). The sample repartition is as shown in Table 1.

Measurement Tool

The measurement tool used to assess the young people's online and offline bullying, other on-line related behaviours and the socio-demographic characteristics of the participants to the survey was the *Tabby online checklist*. This was specifically designed for the purpose of the Tabby in EU Intervention programme. It is based on the Willard (2007) typology of cyberbullying that proposes a typology of the most common online violent behaviours to

Table 1 Sample repartition

Type of school	Grade	Mean age (standard deviation)	Gender	*n*
Primary school	Yr 3	8 years old and 5 months (5 mths)	41 M/63 F	104
	Yr 4	9 years old and 7 months (4 mths)	74 M/85 F	159
	Yr 5	10 years old and 4 months (5 mths)	78 M/76 F	154
Secondary school	Yr 6	11 years old and 3 months (6 mths)	482 M/535 F	1,017
	Yr 7	12 years old and 6 months (5 mths)	443 M/444 F	887
	Yr 8	13 years old and 4 months (6 mths)	458 M/469 F	927
	Yr 9	14 years old and 3 months (4 mths)	499 M/453 F	952

which we added questions on the frequency and duration. The various variables that were included for online behaviours including digital uses, were: 1/ Time spent online, belonging to social networks, knowing all or part of online friends; 2/ Online victimization (six types of cyberbullying: flaming, sending hurtful messages, threats, social exclusion, impersonation and sexting).

The period of time for measurement was "during the last 6 months". The students could answer from *Likert* type scales ranging from 0 (it never happened during this period), 1 (it happened only once or twice), 2 (it happened sometimes), 3 (it happened about once a week), to 4 (it happened several times a week).

3/ Online perpetration of bullying using the same measures as for victimization.

4/ Offline victimization. The young people were asked if they had been a victim of bullying during the last 6 months. They were asked about nine types of offline bullying, which were: teasing, threats, petty theft (small value objects), serious theft (cell phones, wallets), money extortion, insulting, exclusion from a group of friends, physical aggression.

5/ Perpetration of offline bullying. The participants were asked if in the last 6 months they had ever bullied someone.

The suggested behaviours were the same as for victimization. The possible answers for both offline victimization and perpetration were the same *Likert* type ones as for cyberbullying. Socio-demographic characteristics questions are about the gender, age, school year group, place of living, place of birth. For the purpose of this paper we focus on the school year differences of the respondents since our objective is the comparison of online and offline experiences between the primary and the secondary school children.

Analyses and Ethics

To serve the purpose of this paper we compared the time spent on the Internet, the use of social networks, the percentages of children who knew their online friends and both online and offline involvement in negative experiences between primary and secondary school children. Descriptive analyses and ANOVA were completed through the *Sphynx* survey software and *Statistica*.

As for ethics, all the schools and students were assured of confidentiality and questionnaires were completed anonymously. The Local Authority, the school boards and parents were asked to give their assent for their children to take part to the survey. The children who did not wish to take part despite the adults' authorization were withdrawn from the classroom. The children completed the questionnaire online without the presence of any adult from the school, under the supervision of a research assistant. Each participating school was presented an individual report as well as a global report to be able to analyse their results in comparison with the overall sample.

Findings

Time Spent on the Internet

In order to compare the time spent connected, analyses of variance (ANOVA) were conducted, first with the two types of school (primary vs. secondary), second between the different levels

of classroom within each type of school (respectively Yr 3, Yr 4, Yr 5 and Yr 6, Yr 7, Yr 8 and Yr 9). Results showed a significant difference between average connection time of primary school children ($M_{primary}$=147 min- 2 h 27 min) and lower secondary school students ($M_{secondary}$=190 min–3 h 10 min), $F (1, 4198)$=18.27, p<.01. There is no significant difference in the time spent connected within the primary school children group, $F(2, 414)$=.84, ns, even if time spent connected slightly increased from year 3 to year 5 (M_{Yr3}=135 min–2 h 15 min, M_{Yr4}=139 min–2 h 19 min and M_{Yr5}=163 min–2 h 43 min). Conversely, there is a significant difference in time spent connected within the secondary school children group, $F(3, 3779)$=46.06, p<.001 (M_{Yr6}=142 min–2 h 22 min, M_{Yr7}=170 min–2 h 50 min, M_{Yr8}= 219 min and M_{Yr9}=232 min–3 h 52 min). Planned comparisons revealed a significant increase in time spent connected between year 6 and year 7, $F(1, 3779)$=9.61, p<.01, year 7 and year 8, $F(1, 3779)$=29.34, p<.001, but not between year 8 and year 9, $F(1, 3779)$=2.24, ns.

Use of Social Networks

Social networking is one of the fastest growing online activities among young people due to the multiple online activities they offer on one site (Chat, messaging, photo publications, blogging functions and messaging) Holloway et al. 2014; Mascheroni and Cuman 2014). Results showed that 27.8 % (n=116) of the primary school children and 66.9 % (n=2532) of the secondary school children were active on social networks. This difference was statistically significant (Chi2=259.92, df=2, p<.01). Thus, near from one third of the primary school children and two thirds of the secondary school children declared to be present on social networks. More precisely, within the primary school children, there are 16.3 % (n=17) of the third graders, 26.4 % (n=42) of the fourth graders and 37 % (n=57) of the fifth graders who declared to be social networkers (Chi2=19.45, df=4, p<.01). Concerning the secondary school children, there was 47.1 % (n=479) of the sixth graders, 62.7 % (n=556) of the seventh graders, 75.9 % (n=704) of the eighth graders and 83.3 % (n=793) of the ninth graders who declared to use social networks. This increase was also statistically significant (Chi2=441.18, df=6, p<.01). In other words, since third grade, children use more and more social networks according to their age.

Moreover, within the children who declared to be present on social networks, 57.8 % of the primary school children and 81.6 % of the secondary school children reported being on Facebook (67 primary school children, and 2065 secondary school children). In other words, 16 % of all the primary school children and 54.6 % of all the secondary school children were on Facebook. Concerning the other social networks, results showed that 4 % of all the primary school children and 20.2 % of all the secondary school children used Skype, 6 % of all the primary school children and 19.7 % of all the secondary used Twitter, and finally that among all the secondary school children, 7.2 % were on Ask.fm, 6.4 % on Instagram and 3.2 % on Snapchat. The number of reported friends on these social networks was investigated. Results showed that the mean number of friends on social networks declared by the children was 158, with 37 friends for primary school children and 163 friends for secondary chool children.

Regarding risks taking, children were asked to say if they personally knew all their online contact/friends. Findings showed that among the primary school children who completed the survey, 38.9 % stated they knew all their online friends. As for secondary school children, they were 49 % to declare to know all of their online

Table 2 Cross comparison of the young people's involvement in cyberviolence as victims in primary an secondary schools

School	Not victim	Victim	Total
Primary school	48 % (200)	52 % (217)	100 %
Secondary school	53.2 % (2,011)	46.8 % (1,772)	100 %
Total	52.7 % (2,211)	47.3 % (1,989)	100 %

friends. This difference is statistically significant (Chi2=15.53, df=1, $p<.01$). This indicates that many children and more specifically primary school children do not know all their online contact/friends personally.

Involvement in Negative Online Experiences

The findings we shall present here (Table 2) are the ones concerning cyberviolence and cyberbullying victimization and perpetration. This section reports the findings concerning victimization. We consider any type of cyberviolence (occasional or repeated) following Blaya's definition (2013) as mentioned p. 2 of this article.

Findings showed that in the last 6 months, children were 47.3 % likely to declare to be victim of cyberviolence, 52 % in primary school and 46.8 % in secondary school (Chi2=4.07, df=1, $p<.05$). Secondary school students report significantly lower percentages of victimization than primary school students with over one child out of two primary school children who stated that he/she was a victim of cyberviolence during the last 6 months. As for the perpetration of cyberviolence findings showed no statistical difference between primary and secondary school children (Chi2=.31, df=1, $p=61$). Over one third of the children declared to be perpetrators but there was no difference between primary and secondary school children.

Table 3 shows the findings about cyberbullying, that is to say that we consider only repeated acts that occurred one or many times per week (Table 3).

Results showed that in the last 6 months, children were 5.6 % to declare to be victim of cyberbullying. There is a great difference according to the school type. Indeed, 13.9 % of the primary school children declared to be cyberbullied whereas 4.7 % of the secondary school students were victims (Chi2=60.58, df=1, $p<.01$).

With regards to the perpetration of cyberbullying findings showed no difference between primary and secondary school children (Chi2=3.43, df=1, $p=.07$).

Table 3 Cross-comparison of the prevalence of cyberbullying victimization between primary and secondary school children

School	Not victim	Victim	Total
Primary school	86.1 % (359)	13.9 % (58)	100 %
Secondary school	95.3 % (3,606)	4.7 % (177)	100 %
Total	94.4 % (3,965)	5.6 % (235)	100 %

Table 4 Different types of cyberviolence experienced by students from primary and secondary schools (% of each category refers to the total number of children of each school type)

School	Online threatening message	Hurtful rumours or content distribution	Identity theft	Dissemination of information or images without agreement	Exclusion from an online group
Primary school	20.1 % (84)	27.1 % (113)	15.4 % (64)	23.3 % (97)	18.9 % (79)
Secondary school	20.4 % (771)	23 % (871)	14.5 % (547)	15.2 % (575)	14.4 % (544)

Different Types of Cyberviolence in which the Participants were Involved in as Victims or as Perpetrators

Children were asked to specify which type of cyber acts they suffered from as listed below. Table 4 presents the answers for victimization.

Results showed no significant differences between primary and secondary school children for three categories of cyberviolence: "Online message threatening" (Chi2=.01, df=1, p=.90), "Hurtful rumours or content distribution" (Chi2=3.47, df=1, p=.07) and "Identity theft" (Chi2=.23, df=1, p=.62). On the contrary, there were significant differences for the two others categories: "Dissemination of information or images without agreement" (Chi2=18.16, df=1, p<.01), and "Exclusion from an online group" (Chi2=6.19, df=1, p<.02). For these latter categories, primary school children reported more acts than secondary school children.

Concerning the involvement in cyberviolence as perpetrators, Table 5 presents the findings according to the school type and the different forms of cyberviolence suggested to the students.

Differences Between Primary and Secondary Schools: *=p<.05; **=p<.01

Findings showed differences between primary and secondary school children for four categories of cyberviolence: "Online message threatening" (Chi2=39.37, df=1, p<.01), "Hurtful rumours or content distribution" (Chi2=7.22, df=1, p<.01), "Identity theft" (Chi2=.23, df=1, p=.62 and "Dissemination of information or images without agreement" (Chi2=5.60, df=1, p<.02). If for the first category (i.e. online threatening message) primary school children stated they were less involved than secondary school children, it was the opposite for the three others. Finally, there was no significant difference between the two groups of children for "Exclusion from an online group" (Chi2=1.14, df=1, p=.29).

Table 5 Cross comparison of the young people's school level and the type of cyberviolence they perpetrated (% of each category refers to the number total of children of each type of school

Cyberviolence school	Online threatening message	Hurtful rumours or content distribution	Identity theft	Dissemination of information or images without agreement	Exclusion from an online group
Primary school	11.3 % (47)	9.1 % (38)	9.1 % (38)	10.3 % (43)	10.8 % (45)
Secondary school	25 % (947)	5.8 % (219)	5.2 % (198)	7.1 % (269)	12.6 % (477)

Table 6 Cross comparison of the young people's school level and the prevalence of school violence victimization

School	Not victim	Victim	Total
Primary school	68.6 % (286)	31.4 % (131)	100 %
Secondary school	82.6 % (3,125)	17.4 % (658)	100 %
Total	81.2 % (3,411)	18.8 % (789)	100 %

Offline Violence in School

According to the literature, cyberviolence and cyberbullying are usually linked to school violence and/or to school bullying (Ybarra et al. 2007). Therefore, children had also to answer some questions about school violence and bullying. This section reports the findings concerning occasional victimization. That is to say that we consider any type of violence, either repeated or not. Table 6 presents the principal results.

Findings showed that in the last 6 months previous to the survey, 18.8 % of the primary school and secondary school children reported to be victims of violence in school. Secondary school students reported significantly lower percentages of victimization than primary school children (Chi2=48.40, df=1, $p<.01$). Results were similar for the involvement of the participant as authors with a lower percentage of secondary students who stated they were involved (Chi2=15.81, df=1, $p<.01$).

As for offline bullying (any act of violence that is repeated at least once a week during the last 6 months or several times a week), we also made a comparison between primary and secondary school participants as presented in Table 7.

Secondary school students reported significantly lower percentages of bullying than primary school students. According to our findings, in the last 6 months, children were 2.6 % to declare to be victims of bullying, but with significant difference according to the type of school. Indeed, 7.2 % of the primary school children reported being bullied whereas they were 2.1 % among the secondary school children (Chi2= 39.49, df=1, $p<.01$).

As for the perpetration of bullying, there are also some significant differences between primary and secondary school children with 5.5 % of the primary school children who reported being perpetrators of bullying versus 1.5 % in secondary schools (Chi2=31.49, df=1, $p<.01$).

Table 7 Cross comparison of the bullying victimization according to the type of school

School	Not victim	Victim	Total
Primary school	92.8 % (387)	7.2 % (30)	100 %
Secondary school	97.9 % (3,705)	2.1 % (78)	100 %
Total	97.4 % (4,092)	2.6 % (108)	100 %

Table 8 Cross comparison of the overlap between traditional and online violence and traditional bullying according to the type of school

School	Not victim of violence and cyberviolence	Victim of violence and cyberviolence	Total
Primary school	84.2 % (351)	15.8 % (66)	100 %
Secondary school	91.7 % (3,470)	8.3 % (313)	100 %
Total	91 % (3,821)	9 % (379)	100 %

Overlap Between Traditional Violence and Online Violence

Finally, we examined the overlap between traditional and online violence and bullying of which findings are presented in Table 8.

In the last 6 months, 9 % of the children declared to be victims of both offline violence and cyberviolence.

Findings showed some significant difference according to the type of school. Indeed, 15.8 % of the primary school children declared to be victims of both types of violence whereas they were 8.3 % of the secondary school children (Chi2=26.10, df=1, $p<.01$).

As for the perpetration of violence (Table 9), differences between primary and secondary school children are significant (Chi2=6.23, df=1, $p<.02$). Primary school children reported a greater involvement of both violence and cyberviolence than secondary school children.

Concerning the children who declared to be victim of both traditional bullying and cyberbullying (Table 10), results showed that primary school children were significantly more victims than secondary school children (Chi2=22.82, df=1, $p<.01$).

As for the perpetration of both bullying and cyberbullying, differences between the two groups of school children are similar to the ones for victimization (Chi2=18.29, df=1, $p<.01$).

The overall findings gathered from this survey lead us to the conclusion that primary school children are more involved in cyberviolence and cyberbullying as well as in offline violence

Table 9 Cross comparison of the prevalence of both traditional and online violence according to the school type

School	Not involved in violence and cyberviolence	Perpetrator of violence and cyberviolence	Total
Primary school	94.2 % (393)	5.8 % (24)	100 %
Secondary school	96.6 % (3,656)	3.4 % (127)	100 %
Total	96.4 % (4,049)	3.6 % (151)	100 %

Table 10 Cross comparison of the prevalence of traditional bullying and cyberbullying victimization according to the school type

School	Not victim of bullying and cyberbullying	Victim of bullying and cyberbullying	Total
Primary school	96.6 % (403)	3.4 % (14)	100 %
Secondary school	99.2 % (3,752)	0.8 % (31)	100 %
Total	98.9 % (4,155)	1.1 % (45)	100 %

and bullying than secondary school children. They also highlight a higher overlap between offline and online violence.

Discussion and Conclusion

The present study compares the negative online and offline experiences between primary and secondary school children and is based on the Tabby in the EU Daphne research action programme.

Contrarily to what could have been expected, the primary school children spend quite a lot of time online even though secondary school children are more active since they spend longer time. Facebook is still reported as being the most used SNS, although Twitter is quite often mentioned even among the youngest children of this study. Twitter, as being quicker and facilitating the rapid rise in popularity as well as its measurement (followers) might become more appealing to young people than Facebook. This confirms the Child Go Mobile study' findings that according to which, the use of handheld devices is part of the 9–10 years old children's daily life and that shows that social networking, sharing and entertainment activities have increased from 2010 to 2013-2014 (Mascheroni and Cuman 2014). Research shows evidence that the longer time you spend online and in social networks, the more at risk of victimization and of being a perpetrator you are (Ybarra and Mitchell 2004, 2008). However our findings show that the younger children spend less time online but are more victimized than secondary school students. This might be explained by greater risk taking such as not knowing all one's online friends. Our findings show that quite a few participants did not know all their friends and meet the conclusions of some research in Spain for which the same percentages (38 %) of children stated they knew all their online friends (Garcia-Guilabert 2014).

As far as risk taking is concerned, although children report high percentages of persons they now, the majority of the participants stated they knew only some of their friends online and this is even truer for the primary school respondents. This is rather concerning in the sense that they take risks as some previous research highlighted (Sengupta and Chaudhuri 2011 ; Ybarra and Mitchell 2004, 2008) and that the most vulnerable people in terms of coping capacities are the youngest ones who stated being more unsettled by their negative experience and also needed more time than secondary school children to overcome the upset (Livingstone et al. 2011; Holloway et al. 2014). Moreover, nearly one child out of three in primary school reported having a social network profile, which is strictly forbidden by law. As our findings show, the older you grow, the more involved in social networking and the transition to secondary school is a step up. Being part of an online social network is a sign of growing up and enables the young people to be and feel part of a community that is far from the adults' supervision (Blaya 2013). Also, many children stated they did not know all their friends online and as such that risk taking has turned into real negative experiences for quite a big part of the children with over half of the primary school children and 46.8 % of the secondary school ones who stated they were victims of occasional online violence. These figures meet previous research on traditional bullying that concludes that bullying decreases with age. As for cyberbullying, 5.6 % of the respondents were victims. These findings are similar to the ones of previous studies in France and in Europe (Blaya 2013; Blaya and Alava 2012; Livingstone et al. 2011). However the primary school children are nearly three times more often

victims than the older respondents, which shows how much the younger children are more vulnerable.

As we could see, children are also perpetrators and are more numerous to be so as for traditional bullying within primary school. Encouraging children to be responsible for their online behaviours from the start and promoting digital positive behaviour might be a step forwards to digital citizenship and Internet safety for all. Cyberbullying is hardly inevitable and it is difficult to keep up with young people's behaviours on the Internet due to the quick changes in technology (hand held technologies, ever more multiple services on offer) and their growing skills. Some previous research showed that although restrictive mediation is one of the parents' and teachers' most common behaviour to protect the children from online harm in France, prohibiting the access to the internet contributes to jeopardize the young people's Access to knowledge and new skills (Blaya and Alava 2012). This leads to a break in the dialogue between the adult and the child and children tend not to report their problems to adults when they encounter difficulties for fear of being denied access to their online activities (Li 2005).

Encouraging adult/child dialogue and citizenship behaviour both online and offline should improve the situation better than prohibition. Schools should provide an educative model for later citizenship, which is to be implemented both in ordinary life and within the cyberspace (Patchin and Hinduja 2012).

One of the major issues raised by our findings is the difference between offline violence and bullying and cyberviolence and cyberbullying. In the path of the Children Go Mobile survey we can conclude that the experience of offline bullying is no more the predominant negative experience in the life of the young people since the percentages of both online victimization and perpetrations are much higher than for face-to-face bullying or violence, including for the primary school children who are more involved than their older counterparts. This might be the result of the rise in communication and the change of the services and activities proposed, which enable young people to be constantly connected. This meets their need to be permanently in contact with their friends but also increases opportunities for harm and negative communication.

Our findings show that bullying and cyberbullying are significantly correlated as previously showed by Hemphill et al. (2012). The school climate is predictor of peer violence and bullying (Debarbieux 2006) and as we could see in this research, being a victim in the school environment is clearly associated to being a victim in cyberspace and to a lesser extent what is going on online does affect traditional victimization in schools. As Patchin and Hinduja (2012) stress a poor school climate, that is a school climate where the feeling of insecurity is high, rules are not clear and discipline is perceived as unfair, where students have a negative representation of the quality of relationships and do not feel respected and protected, generates bullying and violence. The pupils living in such a learning environment are at risk of a range of negative outcomes. Schools should be safe places with a positive climate that has good quality relationships. With the development of online communication, they face new challenges and need to adapt to nowadays realities. School climate surveys should include technological uses and interpersonal online relationships in their measure of the quality of life within their community as these are closely linked together. Prevention measures and interventions were designed for secondary schools first. The lesser extent to which the secondary school students are victimized and more specifically

concerning repeated victimization seems to indicate that older kids have developed higher skills to protect themselves from cybervictimization and engage less in cyberbullying. We can also hope, although there is no evidence from this study that the information and prevention strategies that are taught within the secondary school environment show some effectiveness. The ever younger age of online activities presents some implications at the school level in terms of prevention and intervention strategies that do need to be taken into account to promote a safer and responsible use of online communication.

Limitations of this Study

The present study has a sample limitation since it is not nationally representative and the numbers of victims and perpetrators do not enable finer statistical analysis, particularly for the primary school participants who are less numerous than the secondary school ones. Due to the findings that highlight the high prevalence of the involvement of the youngest children in cyberviolence and cyberbullying, it would be worth replicating a similar survey with a representative sample of both primary and secondary school students.

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