

# Prevalence of Bullying and Cyberbullying in the Last Stage of Primary Education in the Basque Country

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**Abstract.** Bullying and cyberbullying pose a serious problem in our schools. Despite this research area's increasing relevance, most research into cyberbullying in the present day has focused only on adolescents. However, given the long-lasting effects of victimization, it is necessary to understand its prevalence throughout the different educational stages of students. This study aims to clarify the prevalence of bullying and cyberbullying among students in the 5<sup>th</sup> and 6<sup>th</sup> grades. A sample of 1,993 ( $M_{\text{age}} = 10.68$ ,  $SD = 0.71$ ; range 9–13) students completed the "Cyberbullying: Screening of Peer-Harassment" test. The results reveal that 20.3% ( $n = 404$ ) were pure victims, 6.1% ( $n = 121$ ) pure bullies, 23.9% ( $n = 476$ ) bully-victims, and 28.9% ( $n = 575$ ) pure bystanders of bullying. With respect to cyberbullying, 13.4% ( $n = 267$ ) were pure cybervictims, 0.7% ( $n = 13$ ) pure cyberbullies, 3.1% cyberbully-victims ( $n = 62$ ), and 25.6% ( $n = 510$ ) pure cyberbystanders. In addition, the results reveal that verbal aggression and offensive or insulting messages were the most prevalent forms of aggression in bullying and cyberbullying, respectively. 36.6% of the sample had suffered verbal aggression and 8.4% had received offending or insulting messages. These data show that bullying and cyberbullying are considerably prevalent in this educational stage.

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Bullying and cyberbullying have been established as global phenomena, occurring at different educational stages (Kowalski, Giumetti, Schroeder, & Lattanner, 2014). Most studies have focused their analysis on secondary school students and adolescents (Kowalski, Limber, & McCord, 2018) and, subsequently, the vast majority of prevention and intervention programs also focus on this age group (Della Cioppa, O'Neil, & Craig, 2015; Ttofi & Farrington, 2011). The main reason that these studies on cyberbullying have focused on adolescents relies on the assumption that children started to use ICT and smartphones at a later stage. However, data from the Instituto Nacional de Estadística indicate that in 2016, 90.6% and 93.1% of children aged 10 and 11 respectively were already Internet users.

These data show that children of this age group are already Internet users with all the advantages and risks this entails. According to Kowalski, Giumetti, Schroeder, and Lattanner (2014) meta-analysis and review, one of the most worrying consequences of bullying and cyberbullying victimization is that it affects several mental health outcomes. This path has been supported by other meta-analyses showing

a relationship between bullying and cyberbullying victimization and externalizing (i.e., conduct problems, substance use, self-harm) and internalizing disorders (i.e.: depression, anxiety, physical symptoms) (Fisher, Gardella, & Teurbe-Tolon, 2016; Gini, Card, & Pozzoli, 2018), and by longitudinal research, that has shown that victimization can generate harmful long-term consequences (Bannink, Broeren, van De Looij-Jansen, de Waart, & Raat, 2014; Gámez-Guadix, Orue, Smith, & Calvete, 2013), and even lead to suicidal ideation (Holt et al., 2015). Furthermore, chronic victimization from early adolescence can be particularly worrying as recent research has showed that victimization can lead adolescents to develop maladaptive schemas that put them at a higher risk for new episodes of victimization and psychological problems (Calvete, Fernández-González, González-Cabrera, & Gámez-Guadix, 2018).

The worrying consequences of bullying and cyberbullying together with the data of Internet use at this age reveal the need to analyze the prevalence of cyberbullying in this age range, as a step toward creating prevention and intervention programs adapted to this developmental period.

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For this study, we reviewed the literature on bullying and cyberbullying of children in or near their last stage of primary education (9–13 years old) from the last 5 years. The results of the main prevalences are presented in Table 1.

As can be seen in Table 1, with respect to face-to-face bullying, the percentage of victims ranges from 7% (Cerezo, Sánchez, Ruiz, & Areense, 2015; Navarro, Yubero, & Larrañaga, 2015) to approximately 33% (Blaya & Fartoukh, 2016; Leung & Mcbridge-Chang, 2013; Price, Chin, Higa-McMillan, Kim, & Frueh, 2013). In the case of bullies, the proportion ranges from 4% (Iossi-Silva, Pereira, Mendonça, Nunes, & de Oliveira, 2013; Navarro et al., 2015), to approximately 20% (García-Fernández, Romera-Félix, & Ortega-Ruiz, 2016; Leung & Mcbridge-Chang, 2013; Shujja, Att, & Shujjat, 2013). It should be noted that Connell, Schell-Busey, Pearce, and Negro (2014) places prevalence at significantly higher percentages, 61% and 36% for victims and bullies, respectively. For bully-victims, the range varies from 1.3% (Cerezo et al., 2015) to 25% (Shin, Braithwaite, & Ahmed, 2016). Regarding the studies analyzing severe victimization (i.e., students who suffered bullying behaviors very frequently or always), it ranges from 3.9% (García-Fernández et al., 2016) to 11.3% (Chester et al., 2015), while the number of severe bullies' ranges from 1.8% (Leung & Mcbridge-Chang, 2013) to 8% (García-Fernández et al., 2016; Kowalski & Limber, 2013). Fewer studies report the number of bystanders; however, García-Fernández et al. (2016) report that 28% of children were bystanders of face-to-face bullying. In a study involving adolescents, Garaigordobil (2015) reports a slightly higher percentage of 33.7% of adolescents who observed bullying without being involved either as victims or bullies.

When considering cyberbullying, the prevalence of cybervictims ranges from 3% (Jung et al., 2014; Navarro et al., 2015) to 52% (Blaya & Fartoukh, 2016), and the number of cyberbullies ranges from 1% (Navarro et al., 2015; Shin et al., 2016) to 14% (Connell et al., 2014; Fletcher, Fitzgerald-Yau, Jones, Allen, Viner, & Bonell, 2014). Regarding cyberbully-victims, the prevalence ranges from 1% (Shin et al., 2016) to 5% (Kowalski & Limber, 2013; Rice et al., 2015), although the study by Kokkinos, Antoniadou, Dalara, Koufouzou, and Papatziki (2013) reports a rate of 19% of cyberbully-victims. Those studies that analyze severe cybervictimization and severe cyber-aggression place the percentage of severe cybervictims between 4% (Irakas-Sistema Ebaluatu eta Ikertzeko Erakundea-Instituto Vasco de Evaluación e Investigación Educativa, ISEI-IVEI, 2017) (Kowalski & Limber, 2013) and 13.9% (Blaya & Fartoukh, 2016), and that of severe cyberbullies around 3% (Kowalski & Limber, 2013; Leung & Mcbridge-Chang, 2013). As for cyberbystanders, the

range is between 13% of bystanders (García-Fernández et al., 2016) and 28.8% (Pabian et al., 2016).

In regard to the most frequent behaviors, several studies confirm that physical aggressions begin to decrease around the age of 10–11, while verbal and relational aggressions become more frequent (Garaigordobil, 2017). In addition, several studies have found that verbal offenses are the most frequent behaviors in the last stage of primary school, followed by social aggressions (Connell et al., 2014; ISEI-IVEI, 2017) or physical assaults (Price et al., 2013). Given the distinct nature of the behaviors analyzed in the different studies, determining the most frequent cyber-aggression is hard. However, a review of the studies conducted points to offensive and insulting messages, insulting calls, anonymous calls, and the spread of rumors as the most frequent forms of attack (Blaya & Fartoukh, 2016; Garaigordobil, 2013, 2015).

Of note is the inclusion of the study of Garaigordobil's (2013, 2015) with an older sample (aged 12 to 18), as it uses the same structure, instrument and setting as this study and will allow for a comparison between our sample of last stage primary education and her study, with secondary and baccalaureate students.

As shown in Table 1, few studies focus only on primary school students, generally using older participants as part of the sample. In addition, there are large differences in prevalence rates, due to the different instruments used and the different time ranges analyzed. Finally, it can also be observed that hardly any studies provide data on the 4 roles (victim, bully, bully-victim, and bystander) of bullying and cyberbullying.

### *Objectives and Hypotheses*

The main aim of the study is to analyze the global and severe prevalence of bullying and cyberbullying in the last stage of primary education. With this objective, and based on the review of previous studies and their prevalence rates presented in Table 1 and the study of Garaigordobil (2013, 2015) with secondary education students, the following 5 hypotheses are proposed:

- a. In terms of global bullying, we expect to find that around 20%–25% of students will be pure victims, 5%–10% will be pure bullies, 10%–15% will be bully-victims, and 35% will be pure bystanders.
- b. Regarding severe bullying or actual bullying (defined as occurring “often” and “always,” respectively), the expected percentages are that 10% of students will be severe pure victims, 3% will be severe pure bullies and severe bully-victims, and 20% will be severe pure bystanders who will have frequently observed aggressive behaviors among peers over the past year.

**Table 1.** Review of Prevalence Studies in Children of Equivalent Age or Close to those in Lower Primary Education

Reference	Location	N (Age range)	% V	% B	% BV	% CBV	% CBB	% CBBV	Time parameter
Iossi-Silva et al. (2013)	Brazil	387 (8–12)	18.5 <sup>a</sup>	5.8 <sup>a</sup>	5 <sup>a</sup>				2–3 months
Kokkinos et al. (2013)	Greece	300 (10–12)				11.3 <sup>a</sup>	6 <sup>a</sup>	19 <sup>a</sup>	Month
Kowalski and Limber (2013)	United States	913 (11–17)	14.6 <sup>a</sup> (8.4)	17.3 <sup>a</sup> (8.2)	19.2 <sup>a</sup> (3.7)	9.9 (4) <sup>a</sup>	6.1 <sup>a</sup> (2.5)	5.3 <sup>a</sup> (1.9)	2–3 months
Leung and Mcbride-Chang (2013)	China	626 (10–11)	36.1 (6.5)	21.9 (1.8)		16.3 (5.3)	12.2 (4)		
Price et al. (2013)	Hawaii	211 (10–13)	32.7	9		7	4		2–3 months
Bannink et al. (2014)	The Netherlands	3,181 (mean 12.47)	21.4			5.1			Month
Connell et al. (2014)	United States	3,867 (10–14)	61	36		25	13.8		Three months
Fletcher et al. (2014)	United Kingdom	1,144 (12–13)					14.1		Life-span
Jung et al. (2014)	South Korea	2,108 (11–12)				3.3 <sup>a</sup>	3.4 <sup>a</sup>	3.0 <sup>a</sup>	Six months
Shujja et al. (2014)	Afghanistan	839 (10–14)	24.1	23.2					Month
Cerezo et al. (2015)	Spain	847 (mean 12.73)	6.8	8.1	1.3				
Chester et al. (2015)	Transcultural	838 (11,13,15)	29.2 (11.3)						2–3 months
DePaolis and Williford (2015)	United States	660 (mean 9.5)				17.7 (11)			
Fernández-Montalvo, Peñalva, and Irazabal (2015)	Spain	364 (10–13)				13.7	12.3		Life-span
Garaigordobil (2013, 2015)	Spain	3,026 (12–18)	11.6	11.3	27.1	19.6	4.9	10.6	Year
Guilheri, Cogo-Moreira, Kubiszewski, Yazigi, and Andronikof (2015)	France	802 (9–12)	26.8	5.6	14.6				2–3 months
Navarro et al. (2015)	Spain	1,058 (10–12)	8.9	3.6		2.9	1.2		Three months
Rice et al. (2015)	United States	1,185 (10–14)				6.6	5	4.3	Year
Blaya and Fartoukh (2016)	France	417 (8–11)	31.4 (7.2)	(5.5)		52 (13.9)			Six months
García-Fernández et al. (2016)	Spain	1,278 (mean 11.11)	12.40 (3.9)	19.9 (7.8)	15.4 (2.2)	9.3	5.5	3.4	Three months
Pabian, Vandebosch, Poels, Van Cleemput, and Bastiaensens (2016)	Belgium	1,412 (10–13)				13	10		Six months
Shin et al. (2016)	Australia	3,956 (12–13)	29 <sup>a</sup>	6 <sup>a</sup>	25 <sup>a</sup>	6 <sup>a</sup>	0.7 <sup>a</sup>	1 <sup>a</sup>	Month
ISEI-IVEI (2017)	Spain	5,962 (8–13)	22.7			12.5 (3.3)			School year

Note: %V = victims; %B = bullies; %BV = bully-victims; %CBV = cybervictims; %CBB = cyberbullies; %CBBV = cyberbully-victims.

<sup>a</sup>=denotes that the victim, bully and bully-victim categories are mutually exclusive; parenthesis indicates severe implication.

- c. With regard to cyberbullying, we expect that 10%–15% of students will be pure victims, 3%–5% will be pure cyberbullies, 5%–7% will be cyberbully-victims, and 30%–40% of the participants will have been pure bystanders of cyberbullying behaviors over the last year.
- d. For severe cyberbullying, it is proposed that approximately 3% of the student sample will be severe cyber victims, 1% will be severe pure cyberbullies or severe cyberbully-victims, and around 10% will be severe bystanders of cyberbullying behaviors among equals.
- e. The most frequently reported aggressive face-to-face bullying behaviors are expected to be verbal and physical aggression, while for cyberbullying, the most frequent behaviors are expected to be offensive and insulting messages, offensive and insulting calls, and anonymous calls made to provoke fear.

## Method

### Participants

The study sample included 1,993 students in 5<sup>th</sup> and 6<sup>th</sup> grades. The randomly selected children make up a representative sample of pupils in the last stage of primary school in the Basque Country. Participants were aged between 9 and 13 years old ( $M = 10.68$ ,  $SD = 0.71$ ), 50.2% boys and 48.8% girls. 51.5 % ( $n = 1,027$ ) were in the 5<sup>th</sup> grade and 48.5 % were in the 6<sup>th</sup> grade ( $n = 966$ ). 51% of the sample attended public network schools (13 schools) and the remaining 49% attended private or concerted schools (12 schools). For the selection, the population level of the provinces of the Basque Country (Gipuzkoa, Bizkaia and Araba) was taken into account. Of the 1,993 participants, 16.3% attended schools in the province of Araba, 46.9% attended schools in the province of Bizkaia, and the remaining 36.9% attended schools in Gipuzkoa.

### Instruments

To evaluate the variables under study, the “Cyberbullying: Screening of Peer-Harassment” (Garaigordobil, 2013) test was applied. This standardized instrument, with psychometric guarantees of reliability and validity, evaluates both face-to-face bullying and cyberbullying. It provides 4 indicators: Level of victimization, aggression, aggressive-victimization, and observation. The Bullying Scale through a four item scale, assesses four types of bullying: Physical aggression (aggressive actions aimed at a person’s body, e.g. hit, push, slap...); or indirect actions, aimed at their property, e.g. steal or damage the books, backpack); verbal aggression (negative verbal behaviors towards someone, e.g. insults, calling him or her

hurtful names...); social aggression (behaviors that isolate a person from the group, e.g. ignoring the victim and excluding him or her from normal social interactions); and psychological aggression (bullying behaviors to undermine a person’s self-esteem and provoke insecurity and fear, e.g. humiliating the victim or creating insecurity for him or her). The Cyberbullying Scale explores the roles of cybervictim, cyberbully and cyberbystander 15 behaviors related to technological bullying such as: Making offensive calls, making anonymous to calls to frighten, sending offensive and insulting messages, recording a beating and uploading it to YouTube, stealing and uploading private or compromising photos, blackmailing or threatening someone, spreading rumors, secrets, and lies, faking photos or videos and uploading them to YouTube, isolating others in social networks, blackmailing with disclosing intimate details about someone, slandering, impersonation, death threats, sexual harassment.

The 4 items of the bullying scale and the 15 items are phrased in the victim role (e.g. “Have you been blackmailed or threatened with calls or messages during the last year?”), and then in the bully role (e.g. “Have you blackmailed or threatened another student with calls or messages during the last year?”), and finally, in the bystander role (e.g. “Have you witnessed another student being threatened with calls or messages during the last year?”). In both scales participants report the frequency with which they have suffered, performed and observed those behaviors (Likert scale of 0 = *never*, 1 = *sometimes*, 2 = *often*, 3 = *always*) during the last year.

The psychometric analyses in this sample confirm adequate internal consistency on both the bullying scale (global scale  $\alpha = .84$ ; victimization  $\alpha = .80$ ; aggression  $\alpha = .69$ ; and observation  $\alpha = .84$ ) and on the cyberbullying scale (global scale  $\alpha = .91$ ; cyber-victimization  $\alpha = .83$ ; cyber-aggression  $\alpha = .91$ ; cyberobservation  $\alpha = .89$ ). Exploratory factor analysis confirmed a three-factor structure (victims, aggressors, bystanders) on both scales that explains 61.61% and 43.72% of the variance for bullying and cyberbullying, respectively. The assessment tool also showed convergent validity yielding positive correlations between aggression and aggressive conflict resolution, antisocial behavior, psychopathological disorders, school problems, neuroticism, and negative correlations with empathy, emotional regulation, responsibility as well as social adaptation in the original sample (Garaigordobil, 2013).

### Design and procedure

This research used a descriptive and comparative cross-sectional design. With regard to the procedure, firstly an e-mail was sent to the randomly selected schools to explain the research, afterwards a telephone

or personal interview was set to further the information and clarify the queries of the school staff. Once the school agreed to participate consent forms were sent to parents and students via school administration and a date was set for completing the cyberbullying test. After informed consent of school administration, the parents, and the students were obtained, the test was administered in a 45-minute session by members of the research team, who presented the standardized instructions and gave the questionnaire to the participants. They completed the test in a classroom, in a group setting. Even though most of the students in the classrooms participated, under the Organic Law on the Protection of Personal Data (LOPD), several institutions did not provide the number of students who did not agree to participate in the research.

The study complied with the with the ethical values required in research involving human beings, respecting the fundamental principles included in the Helsinki Declaration (informed consent and right to information, protection of personal data and guarantees of confidentiality, non-discrimination, gratuity and the right to withdraw from the study in any of its stages), receiving a favorable report from the ethics committee of the University of the Basque Country (CEISH/229/2013). After collecting the data, an individual report was sent to each school providing information on the prevalence of the school and of the autonomous community.

### Data analysis

First, the frequencies and percentages of students who were victims, perpetrators and bystanders of face-to-face bullying were calculated according to 4 mutually exclusive categories: "Pure victims", "pure bullies", "bully-victims", (those who had been victims and also aggressors) and "pure bystanders" (had not performed or suffered aggressions but had observed them between their peers). Taking these categories into account, the global prevalence (i.e. suffered/perpetrated/witnessed one or more behaviors *sometimes*, *often* and *always* during the past year) and the severe prevalence (i.e. suffered/perpetrated/witnessed one or more behaviors *often* and *always* during the past year) of both bullying and cyberbullying is identified. Lastly, the frequency and percentage of victims, bullies and bystanders of the different types of aggressive behavior analyzed is reported.

## Results

### Global and severe bullying and cyberbullying prevalence

The descriptive analyses (frequencies and percentages) (see Table 2) revealed that with respect to face-to-face

**Table 2.** Global and Severe Prevalence in Bullying and Cyberbullying

	Global	Severe
	<i>f</i> (%)	<i>f</i> (%)
Bullying		
Pure victim	404 (20.3)	263 (13.2)
Pure bully	121 (6.1)	32 (1.6)
Bully-victim	476 (23.9)	40 (2.0)
Pure bystander	575 (28.9)	463 (23.2)
Cyberbullying		
Pure cybervictim	267 (13.4)	58 (2.9)
Pure cyberbully	13 (0.7)	5 (0.3)
Cyberbully-victim	62 (3.1)	3 (0.2)
Pure cyberbystander	510 (25.6)	125 (6.3)

Note: *f* = frequency; % = percentage.

bullying: 20.3% of the sample were pure victims; 6.1% were pure bullies; 23.9% were bully-victims; and 28.9% had observed bullying behaviors in the last year, without having suffered or performed them. In terms of severe prevalence: 13.2% of the sample were severe pure victims of face-to-face bullying; 1.6% were severe pure bullies; 2% were severe bully-victims; and 23.2% of the sample observed fairly often or always aggressive behaviors among partners in the last year, without having been either a victim or a perpetrator.

When analyzing cyberbullying, we found that 13.4% of the sample were pure cybervictims, 0.7% were pure cyberbullies, 3.1% were cyberbully-victims, and 25.6% had observed or had knowledge of one or more aggressive cyberbullying behaviors among peers. In terms of cyberbullying at a severe level, the results show that 2.9% were severe pure cybervictims, 0.3% were severe pure cyberbullies, 0.2% were severe cyberbully-victims, and that 6.3% of the sample had observed cyberbullying behaviors quite often or always among peers in the past year.

### Percentages and frequencies of victims, aggressors and bystanders in bullying and cyberbullying behaviors

With respect to the percentage of those involved in each of the face-to-face bullying behaviors, the results in Table 3 show that the most prevalent aggressions are verbal aggressions, both in global and severe form. In addition, victims, aggressors and bystanders agree and report that physical aggressions are the second most frequent behavior, followed by social aggressions and finally psychological aggressions.

Regarding cyberbullying, as can be seen in Table 4, the comparison of the information from the 3 roles indicates that the 5 most prevalent behaviors are the

Table 3. Frequencies and Percentages of Victims, Perpetrators and Bystanders of Aggressive Face-to-Face Behavior

	Victims				Bullies				Bystanders			
	Never	Sometimes	Often	Always	Never	Sometimes	Often	Always	Never	Sometimes	Often	Always
	f (%)	f (%)	f (%)	f (%)	f (%)	f (%)	f (%)	f (%)	f (%)	f (%)	f (%)	f (%)
Physical Aggression	1,583 (79.4)	309 (15.5)	89 (4.5)	12 (0.6)	1,750 (87.8)	220 (11.0)	22 (1.1)	1 (0.1)	976 (48.9)	659 (33.1)	292 (14.7)	66 (3.3)
Verbal aggression	1,263 (63.4)	516 (25.9)	180 (9.0)	34 (1.7)	1,517 (76.1)	434 (21.8)	34 (1.7)	8 (0.4)	717 (36.0)	740 (37.1)	424 (21.3)	112 (5.6)
Social aggression	1,623 (81.4)	254 (12.7)	99 (5.0)	17 (0.9)	1,803 (90.4)	171 (8.6)	18 (0.9)	1 (0.1)	1,122 (56.3)	568 (28.5)	224 (11.2)	79 (4.0)
Psychological aggression	1,697 (85.2)	204 (10.2)	72 (3.6)	20 (1.0)	1,888 (94.7)	88 (4.4)	13 (0.7)	4 (0.2)	1,330 (66.7)	446 (22.4)	155 (7.8)	62 (3.1)

Note: f = frequency; % = percentage.

following: offensive and insulting messages and calls to scare and frighten; blackmail or threats through calls or the Internet; defamation by telling lies over the Internet about a person in order to disregard the rights of others.

## Discussion

This study aimed to analyze the prevalence of bullying and cyberbullying among students in the last stage of primary education.

The results showed that 20.3% of the students were pure victims, 6% pure bullies, 23.9% bully-victims, and 28.9% bystanders. In this way, hypothesis 1 was supported almost entirely, and the results confirmed the review carried out in international studies. Specifically, similar percentages of victims were found in Bannink et al. (2014) and ISEI-IVEI (2017), and several studies found similar percentages of bullies involved in face-to-face bullying (Cerezo et al., 2015; Shin et al., 2016). The percentage of bully-victims found in this study is similar to that of Shin et al. (2016), who found 25%, but higher than those reported by most studies, which overall reported figures below 15% (García-Fernández et al., 2016; Guilheri et al., 2015), as well as studies that found percentages below 5% (Cerezo et al., 2015). Finally, the percentage of bystanders is similar to that reported by García-Fernández et al. (2016), who found 28.45% of bystanders.

Regarding Hypothesis 2 on the severe prevalence of bullying, the results reveal the existence of 13.2% severe pure victims, 1.6% severe pure bullies, 2% severe bully-victims, and 23.2% pure bystanders who have observed these aggressive face-to-face behaviors very frequently. Therefore, Hypothesis 2 is confirmed and consistent with the results of other studies that have analyzed the percentage of severe victims of bullying, such as Chester et al. (2015), who found 11.3% were severe victims, Leung and McBride-Chan (2013), who found 1.8% were severe aggressors, and Kowalski and Limber (2013), who found 3.7% were severe bully-victims.

Regarding the prevalence of cyberbullying, Hypothesis 3 is partially confirmed as the numbers of pure cybervictims (13.4%) and pure cyberbystanders (25.6%) are similar to those expected; however, the numbers of pure cyberbullies and cyberbully-victims are lower, at 0.7% and 3.1%, respectively. This percentage of cybervictims coincides with the results of other studies (Fernández-Montalvo et al., 2015; ISEI-IVEI, 2017; Kokkinos et al., 2013). The prevalence of cyberbullies in this study is lower than that found by most studies, which have reported a prevalence of around 3% (Jung et al., 2014; Price et al., 2013;

**Table 4.** Frequencies and Percentages of Cybervictims, Cyberbullies and Cyberbystanders of the 15 Cyberbullying Behaviors

Item	Cybervictims				Cyberbullies				Cyberbystanders			
	N	S	O	A	N	S	O	A	N	S	O	A
	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)								
1	1,827 (91.6)	149 (7.5)	17 (0.9)	0 (0.0)	1,946 (97.7)	43 (2.2)	2 (0.1)	2 (0.0)	1,587 (79.7)	337 (16.9)	59 (3.0)	7 (0.4)
2	1,941 (97.4)	44 (2.2)	8 (0.4)	0 (0.0)	1,975 (99.1)	14 (0.7)	1 (0.1)	1 (0.1)	1,749 (87.9)	213 (10.7)	24 (1.2)	4 (0.2)
3	1,962 (98.4)	29 (1.5)	2 (0.1)	0 (0.0)	1,982 (99.5)	8 (0.4)	1 (0.1)	1 (0.0)	1,818 (91.3)	142 (7.1)	23 (1.2)	7 (0.4)
4	1,958 (98.2)	32 (1.6)	3 (0.2)	0 (0.0)	1,986 (99.7)	4 (0.2)	1 (0.1)	1 (0.0)	1,818 (91.3)	152 (7.6)	17 (0.9)	3 (0.2)
5	1,979 (99.3)	11 (0.6)	3 (0.2)	0 (0.0)	1,985 (99.7)	4 (0.2)	2 (0.1)	2 (0.0)	1,865 (93.7)	113 (5.7)	8 (0.4)	4 (0.2)
6	1,883 (94.4)	93 (4.7)	14 (0.7)	3 (0.2)	1,973 (99.1)	18 (0.8)	0 (0.0)	0 (0.0)	1,779 (89.4)	178 (8.9)	27 (1.4)	6 (0.3)
7	1,912 (95.9)	68 (3.4)	11 (0.6)	2 (0.1)	1,973 (99.0)	17 (0.9)	1 (0.1)	1 (0.0)	1,792 (90.1)	172 (8.6)	18 (0.9)	8 (0.4)
8	1,963 (98.5)	24 (1.2)	6 (0.3)	0 (0.0)	1,984 (99.6)	4 (0.2)	2 (0.1)	2 (0.1)	1,898 (95.3)	77 (3.9)	12 (0.6)	3 (0.2)
9	1,961 (98.3)	28 (1.4)	3 (0.2)	1 (0.1)	1,985 (99.6)	5 (0.3)	1 (0.1)	1 (0.0)	1,889 (94.8)	91 (4.6)	9 (0.5)	1 (0.1)
10	1,921 (96.4)	62 (3.1)	8 (0.4)	2 (0.1)	1,981 (99.4)	9 (0.5)	1 (0.1)	1 (0.0)	1,839 (92.4)	127 (6.4)	20 (1.0)	4 (0.2)
11	1,979 (99.2)	13 (0.7)	1 (0.1)	0 (0.0)	1,987 (99.7)	2 (0.1)	1 (0.1)	1 (0.1)	1,861 (93.4)	113 (5.7)	11 (0.6)	5 (0.3)
12	1,966 (98.6)	24 (1.2)	3 (0.2)	0 (0.0)	1,987 (99.7)	3 (0.2)	1 (0.1)	1 (0.0)	1,890 (94.9)	87 (4.4)	8 (0.4)	5 (0.3)
13	1,962 (98.4)	25 (1.3)	6 (0.3)	0 (0.0)	1,986 (99.7)	4 (0.2)	1 (0.1)	1 (0.0)	1,871 (94.0)	100 (5.0)	13 (0.7)	6 (0.3)
14	1,951 (97.9)	34 (1.7)	6 (0.3)	2 (0.1)	1,987 (99.7)	3 (0.2)	1 (0.1)	1 (0.0)	1,867 (93.8)	106 (5.3)	15 (0.8)	2 (0.1)
15	1,916 (96.1)	62 (3.1)	15 (0.8)	0 (0.0)	1,986 (99.7)	4 (0.2)	1 (0.1)	1 (0.0)	1,821 (91.5)	141 (7.1)	20 (1.0)	8 (0.4)

Note: 15 cyberbullying behaviors. 1 = Offensive/insulting messages; 2 = Offensive/insulting calls; 3 = Attacking, recording and hanging on Internet; 4 = Broadcasting private photos/videos; 5 = Taking photos in dressing rooms, beach...to broadcast; 6 = Anonymous frightening calls; 7 = Threatening by calls or messages; 8 = Sexual harassment by cellphone/Internet; 9 = Identity theft; 10 = Theft of password; 11 = Touching up photos/videos and broadcasting them; 12 = Isolating on social networks; 13 = Blackmailing by threatening to broadcast intimacy; 14 = Death threats; 15 = Slandering and spreading rumors to discredit someone. N = *Never*; S = *Sometimes*; O = *Often*; A = *Always*; *f* = frequency, % = percentage.

Rice et al., 2015). Even so, the percentage of cyberbullies found in this study is similar to that found in several other studies such as Navarro et al. (2015), which found 1.2% of cyber-aggressors, and Shin et al. (2016), which found 0.7% of cyberbullies in Australia. On the other hand, the percentage of cyberbully-victims found in our study is similar to that found by other studies such as that of García-Fernández et al. (2016) or Jung et al. (2014), which found 3.4%, and 3%, respectively. However, these results were also lower than in several other studies. Regarding the number of bystanders identified, Pabian et al. (2016) found a 28.8% of cyberbystanders in their studies, matching the present study. Similarly, Garaigordobil (2013, 2015) found 34.7% were cyberbystanders in a study with adolescents.

Concerning the prevalence of severe cyberbullying, the results reveal that 2.9% of the sample were severe pure cybervictims, 0.3% were severe pure cyberbullies, 0.2% were severe cyberbully-victims, and 6.3% were cyberbystanders who have observed cyberbullying behavior very frequently. Hypothesis 4 was confirmed, as we found similar percentages to those predicted in the 4 roles. These figures are slightly lower than those of other reviewed studies with adolescents that found about 5% were severe cybervictims (Kowalski & Limber,

2013; Leung & McBride-Chang, 2013; Garaigordobil, 2013, 2015), but are similar to those found by ISEI-IVEI (2017), which found 3.3% were severe cybervictims in the last stage of primary education. Regarding the number of severe cyberbullies and severe cyberbully-victims, the figures are also lower than in studies that analyzed these involvement categories (Kowalski & Limber, 2013; Leung & McBride-Chang, 2013), which found between 2.5% and 4% were severe cyberbullies, or Kowalski and Limber (2013), which found 1.9% were severe cyberbully-victims.

Finally, as regards the most frequent behaviors, victims, aggressors, and bystanders agreed that in face-to-face bullying the most prevalent forms of aggression are verbal, whereas the second most frequent are physical. Regarding the most prevalent cyberbullying attacks, cybervictims, cyberbullies, and cyberbystanders agreed that offensive and insulting messages and calls to scare and frighten are the 2 most frequent behaviors. Therefore, Hypothesis 5 was completely confirmed.

These results agree with several studies pointing to verbal aggression as being the most common form of aggression (Price et al., 2013), but contrast with Williams and Guerra (2007), who indicated that physical aggression was more prevalent than verbal aggression.

This difference may be due to the mean age of the samples under study, which were slightly lower than the mean age of this study, as the literature confirms the predominance of physical bullying at younger ages (Garaigordobil, 2017). As for cyberbullying, the behaviors analyzed in other research (e.g., e-mail, SMS text messages, specific social media, etc.) differ from those studied here, thus making it difficult to compare results; however, they point in the same direction as Garaigordobil's (2013, 2015) studies, which also found these behaviors were the most prevalent among adolescents and young people in the Basque Country, and other international studies (e.g. Blaya & Fartoukh, 2016).

These results imply that, although the prevalence of cyberbullying is less frequent than that of face-to-face bullying, it is a real problem in this educational stage, even at a severe level. For this reason, and because of the effects of victimization on children's and adolescents' mental and physical health outcomes such as higher levels of depression, anxiety, loneliness, psychosomatic complaints and lower self-esteem and academic performance among others (Garaigordobil, 2017; Kowalski et al., 2018), it is important to create and implement programs for the prevention and intervention of bullying and cyberbullying in order to teach children the risks and implications of using communication technologies, as well as teaching them strategies to deal with situations of cyberattacks, either as a cybervictim or as a bystander.

It should be noted that, although there are empirically validated bullying and cyberbullying prevention programs, they have usually been oriented toward secondary school students. For this reason, it is necessary to create new content or adapt existing programs for these ages and this developmental stage. This will also result in greater prevention, since, as the meta-analyses of Yeager, Fong, Lee, and Espelage (2015) show, the effect of the programs is greater when conducted with those aged younger than 12–13 than with those older than 12–13 years of age.

Finally, this study is not exempt from limitations, in particular the use of self-reporting with the social desirability bias that entails. In addition, although the sample is representative of the Basque Country, it would be useful to carry out prevalence studies in other geographical settings. Furthermore, another limitation comes from not gathering data on the use of ICT from the participants, doing that would have permitted to run comparisons between the data on use of ICT from the Instituto Nacional de Estadística and our sample, and between users and non-users of Internet and the different roles of cyberbullying. In spite of these limitations, this study makes a significant contribution by providing prevalence data on the different

roles involved in bullying and cyberbullying in an educational stage that has been understudied until now but that, according to the studies analyzed here, is as likely to be cybervictimized as secondary school students. For this reason, the main objective of any future research work must be to create prevention and intervention plans with appropriate content adapted to this educational stage.

In this sense, in addition to the already mentioned bullying and cyberbullying interventions, programs that promote improvement in the social climate of the classroom, respect for difference, enhanced empathy and emotional expression, increased self-esteem, more prosocial behavior, cooperative conflict resolution skills, and anger control (Garaigordobil, 2013) should be implemented in schools. In addition, given the vital role that parents and teachers play in the lives of children of this age, it is imperative that future programs involve both the family and the school in tackling these problems.

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