

EMPIRICAL MANUSCRIPT

Bullying and Cyberbullying among Students with Cochlear Implants

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Abstract

Bullying is a significant problem for young people nowadays, regardless of their identity, culture, or background. Although the scientific evidence warns of a greater impact of bullying on vulnerable groups such as cochlear implant (CI) users, few specific studies have been carried out in this regard. As such, the fundamental objective of this study was to estimate the prevalence of both traditional bullying and cyberbullying among Spanish adolescents and young people with CI. Parents with children CI users were also invited to participate to explore their perspective concerning the victimization of their children. The information was collected using one survey for students aged 11–23 year ($n = 102$) and another for parents ($n = 127$). Beyond the frequency and types of bullying suffered or the methods used for coping with victimization, results also show lower rates of bullying when students were asked specifically with a single-item question than when applying multi-item questionnaires. The results are discussed in terms of the broader international bullying and victimization literature.

Bullying has traditionally been defined as a form of repeated and deliberate aggression, carried out by one or several people on another who has reduced ability to defend themselves (Olweus, 1993). With the emergence of new technologies in recent decades, the transfer of traditional or face-to-face bullying into new virtual environments is a potential risk. Experts have defined cyberbullying as a type of bullying carried out through technological means (Smith et al., 2008), which has both similarities (e.g., intent to harm) and differences (e.g., easier for the perpetrator to remain anonymous) in regard to traditional bullying (Tokunaga, 2010). One of the particularities of cyberbullying is that victimization can be continued over time due to the difficulty of removing images and content from the Internet. Furthermore, the cyberbully has the possibility of “invading” the space of the other and of doing harm without time limits.

In addition, they may be anonymous and difficult to prosecute. For example, it is relatively simple for any individual to create false content to cyberbully others and to do so from a device that is not their own. A person can be victimized in different ways. There are behaviors typical of the physical format, such as being pushed or hit, whereas other behaviors characterize the online format, like hacking a social networking account (Del Rey et al., 2015). Other behaviors can be suffered regardless of the format, such as the spread of rumors, being threatened or insulted.

Different studies have attempted to identify variables or characteristics that may increase a person's risk of victimization (either offline or online). The victim's personality and their relationship to their peers such as friendships, prosocial behavior, social or communication skills, assertiveness, or empathy have been the focus of interest for many researchers

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(e.g., Avşar & Ayaz-Alkaya, 2017; Foody et al., 2019; Garaigordobil, 2011; Jenkins et al., 2016; Mitsopoulou & Guivazolias, 2015; You & Bellmore, 2012). In addition, there are authors who point out that victimization often occurs when the targets are different in some way to the majority (Hoover & Stenhjem, 2003; O'Moore, 2010) be it physically (Pinquart, 2017) or socially (Platero & Gómez, 2007). One important example of this is the widespread literature documenting individuals with special educational needs (SEN) to have an increased risk of victimization compared to their peers who do not possess the same educational needs (Fink et al., 2015; Schroeder et al., 2014). Research has indicated that this is due to higher difficulties in adjusting to the social system at school, which may lead to them being perceived as outsiders from their peer group (Farmer et al., 2015).

Bauman and Pero (2010) state that people who are deaf may be at greater risk of victimization precisely because of the social challenges linked to their hearing difficulties. Other studies also indicate that people who are deaf and hard of hearing (DHH) in general, and cochlear implant (CI) users in particular (Warner-Czyz et al., 2018), may be susceptible to greater marginalization by their peers (Broekhof et al., 2018). International research has reported higher levels of victimization for children and adolescents aged 7–18 years old wearing auditory technology in the USA when compared to studies with the general population in the same country (Warner-Czyz et al., 2018). A similar trend was found for deaf students both in Sweden (15–16 years old; Brunnberg et al., 2018) and DHH students in Taiwan (12–18 years old, Cheng et al., 2019). A study in Holland compared DHH students and their typical hearing peers (9–15 years old; Broekhof et al., 2018), and found higher victimization rates among the DHH sample, but lower perpetration. Higher bullying victimization rates were also found in a study in Brazil with both deaf adolescents and their typical hearing peers (34.6% at least sometimes vs. 21.9%; 14–16 years old; Ernsen, 2016), as well as higher bullying perpetration rates (34.6% vs. 23.5%), yet these results were not statistically significant. On the other hand, Bauman and Pero (2010) conducted a study in the USA with a sample aged 12–18 years old and reported that the bullying experiences of students who were DHH and their typical hearing peers were actually similar.

Deaf students may have greater difficulties adapting to the mainstream school environment when their primary communication is not oral language (Brunnberg et al., 2018). They can also be perceived as different if they are wearing visible hearing aids, using sign language or have distinct speech (Cheng et al., 2019). All this may lead DHH individuals to suffer higher rates of bullying than their typically hearing peers. Furthermore, communication difficulties may even lead victims to reduced help-seeking behaviors (Bauman & Pero, 2010; Broekhof et al., 2018; Ernsen, 2016).

The capacity of victimized individuals to seek help is another variable that has caught the interest of scholars in the area. For example, some studies have shown that bullied children will turn mainly to friends or classmates for help (Defensor del Pueblo, 2007; Rigby, 2017), whereas others found that children with SENs were more likely to report bullying to an adult (Hartley et al., 2017). Whether it is a teacher or a parent, adult intervention appears to be the most efficient way to end a bullying episode and has a positive impact on the well-being of the victim (Bjereld et al., 2019), as remarked by the victims themselves (Didaskalou et al., 2016). However, adults tend to be unaware of bullying unless children tell them (Matsunaga, 2009), at least not until the situation is so bad that it can no longer be hidden (Bjereld et al., 2019). A study conducted by Harcourt et al. (2015) found that

when parents learned about the bullying, they tended to provide emotional support and suggest strategies their children could use to cope. Another approach used by parents was speaking to school staff or the bullies and their families to protect their own children (Harcourt et al., 2015). Yet, there are parents who normalize bullying as a typical childhood experience (Sawyer et al., 2011). Besides, some parents also seem to be skeptical about schools taking effective measures to manage bullying (Hale et al., 2017).

Despite the mass social concern about bullying being a significant problem for young people and the scientific evidence that warns of its greater impact on vulnerable groups such as young CI users (Warner-Czyz et al., 2018), few specific studies have been carried out in this regard. The need to address this issue becomes particularly relevant when the population at risk increases, as evidenced by reports of a 25% growth in children CI users over a period of 5 years (National Institute on Deafness and Other Communication Disorders, 2017). Concretely in Spain, it is estimated that in the year 2020 there are about 17,500 CI users, of which 40% are children (Federación de Asociaciones de Implantados Cocleares de España, 2020). As such, the fundamental objective of this study was to estimate the prevalence of both bullying and cyberbullying behaviors among a very specific target group: adolescents and young people with CI (aged 11–23 years). We also believed it to be important to learn about the different types of victimization behaviors suffered and the frequency, as well as where and how it happened, or how and if the victims engaged in help seeking behavior. Moreover, it seemed of great interest to survey the parents of adolescents and/or young people with CI, to evaluate their perceptions about their children's experiences in terms of bullying and victimization. Therefore, the main aim of the present study was to estimate the prevalence of bullying and cyberbullying (both measured by self-report via a single item and with the application of a specific questionnaire), but there was also the secondary aim to evaluate the levels of victimization reported by parents of students with CI. A third and final research question was related to the characteristics of the victimization experience and the methods of coping with bullying, particularly who was told about it.

Method

Participants

The sample was obtained from families linked to any of the associations that currently form part of the Federación de Asociaciones de implantados cocleares de España [AICE; Federation of Associations of Cochlear Implant users of Spain], including school-age and/or university students (aged 11–23 years). A cross-sectional design and nonprobability sampling were used for the selection of participants. This type of sample was chosen given the exploratory nature of the present work, the difficulties in having an exhaustive census of young CI users and the need to guarantee the confidentiality and anonymity of the responses. As such, participants were invited to participate in the study through the social networks and mailing lists obtained from AICE.

The initial sample consisted of a total of 240 participants (106 students and 134 parents). A total of 11 cases (4 students and 7 parents) were eliminated: two cases due to missing responses (more than 1%), and 9 cases due to inconsistencies or contradictory response patterns (i.e., informing about having a CI and then reporting not having CI in any ear). The final sample

consisted of 229 individuals (102 students and 127 parents). The ages of the students were between 11 and 23 years old (mean = 15.86; SD = 2.52; 31.4% aged 11–14 years, 47.1% aged 15–17 years, and 21.6% aged 18–23 years). Half of this sample were female. The educational level distribution was 36.3% in obligatory secondary education (Grades 7–10), 36.7% postobligatory levels of secondary education (Grades 11–12 or vocational education and training) and 27.3% were attending college. Regarding their CI use, the mean years of having a CI was 13.06 (SD = 4.08); 52.5% of the sample had CI in both ears, whereas 29.3% wore it in the right side, and 18.2% in the left. Parent ages ranged from 36–67 years old (mean = 49.47; SD = 5.62) and 71.7% of this sample were female. Even though only one parent of each student was asked to participate, the sample of parents outnumbered the sample of students because more parents chose to participate in the research whereas some of their children refused.

The study was conducted between July and November 2018 but avoiding August and September as the students did not attend their academic centers in those months.

Materials

The information was collected using two surveys (one for students and one for parents). The sample was spread out geographically across Spain, so an anonymous online survey was chosen to retrieve the information. The student sample, which included adolescents and young adults, was obtained through a questionnaire that could be completed online or in person over the course of educational summer camps carried out by AICE, whereas the parent sample could only be accessed online. The questionnaire applied in the educational camps was paper based, and it was completed by 39 students in two different groups. One of the authors was present in the room to answer questions. In the case of the online questionnaire, respondents were given the opportunity to contact one of the researchers by e-mail with any query. A bivariate tabulation by fulfillment format (online or face-to-face) was performed to ensure that there were no significant differences in this regard. Parents were instructed to think about their child CI user, in case they had more children. For both samples, the questions were structured into two different blocks (outlined in the following sections) with a third section relating to sociodemographic information presented at the end of the survey (i.e., age, sex, and province of residence).

Standardized Bullying Measure The first block included two instruments to assess the prevalence of bullying and cyberbullying. The instruments applied to students were the Spanish versions of the European Bullying Intervention Project Questionnaire (the EBIP-Q to assess traditional bullying; Ortega-Ruiz et al., 2016) and the European Cyberbullying Intervention Project Questionnaire (the ECIP-Q to assess cyberbullying; Del Rey et al., 2015; Ortega-Ruiz et al., 2016). The EBIP-Q contains two scales, one for victimization (seven items) and one for perpetration (seven items). It is designed to assess the frequency of traditional victimization and/or perpetration and the items relate to the types of bullying established in the literature including: physical (e.g., “Someone has hit me”; “I have hit others”), verbal (e.g., “Someone has insulted me”; “I’ve spread rumours about someone”) and relational bullying/victimization (e.g., “I have been excluded or ignored by others”). The frequency of these behaviors is estimated taking as a reference the previous

two months through a Likert scale with 5 response options: 0 “Never”; 1 “Once or twice”; 2 “Once or twice a month”; 3 “Once a week”; 4 “Several times a week”. Answers from “once or twice a month”, “once a week” and “several times a week” were coded as involvement for both perpetration and victimization. Internal consistency was assessed using Cronbach’s alpha, which was .82 for the victimization scale and .56 for the perpetration scale. These coefficients are adequate in accordance with Hinton et al. (pp 363, 2004), as an alpha coefficient between .50 and .70 is considered to show a moderate reliability and a coefficient between .70 and .90 presents high reliability.

The ECIP-Q presents a similar structure but is longer to account for multiple forms of cyberbullying (e.g., “Someone threatened me through texts or online messages”, “I have created a fake account, pretending to be someone else”). This scale has 22 items, 11 for cyber victimization and 11 for cyber perpetration. The Cronbach alpha coefficient was .83 in the victimization scale and .87 for the perpetration scale.

For parents, a version of these questionnaires was included applying only the victimization scale and modifying the items to relate to behaviors suffered by their children (e.g., “Someone hit, kicked or pushed my child”, “Someone posted embarrassing videos or pictures of my child online”). The Cronbach alpha coefficient was .56 for the traditional victimization scale and .73 for the cyberbullying scale.

Self-Perceived Bullying Involvement The second block was concerned with direct questions of having felt victimized for the student group (“Do you think you have suffered bullying at school?” and “Do you think you have suffered cyberbullying?”) and thinking about how their children had been targeted for the parent group (“Do you think your child has suffered bullying at school?” and “Do you think your child has suffered cyberbullying?”). Answer options included “No, never”; “Yes, once in my lifetime but prior to last year”; “Yes, during the last year”; “Yes, at the present time”. The answers “once in my lifetime but prior to last year”, “during the last year” and “at the present time” were coded as self-identified victimization. No direct questions were posed in relation to perpetration.

Besides assessing the different types of bullying and their frequency, it was also one of the main objectives to learn why victims felt they had been victimized. In order to accomplish this objective, the students who had self-identified themselves as victims at least once in their lifetime were asked a specific set of questions regarding the experience. This subsample of self-identified victims included 29.4% of the total student sample ($n=30$) and 32.3% of the parent total sample ($n=41$). Both students and parents informed about their perceived reasons for the bullying taking place, having a pool of options ranging from those linked to hearing difficulties (i.e., “not understanding well when others speak” or “wearing something others don’t, like a hearing aid or an implant”) to reasons linked to ethnicity, sexual orientation, body size or other characteristics of the victim or perpetrator(s) (see Figure 1 for more detail). In addition, they had an open-answer option to add any other reasons that were not already specified in the questionnaire. The self-identified victims were also asked to answer several items regarding who they told about having suffered bullying, how long it took for them to tell others, how the people in their environment had reacted (parents, teachers, classmates, and friends), whether they felt their bullying case had been solved (i.e., the victimization ended in a way that proved somewhat satisfactory for the victim) and if they perceived their school had tried to solve the situation.

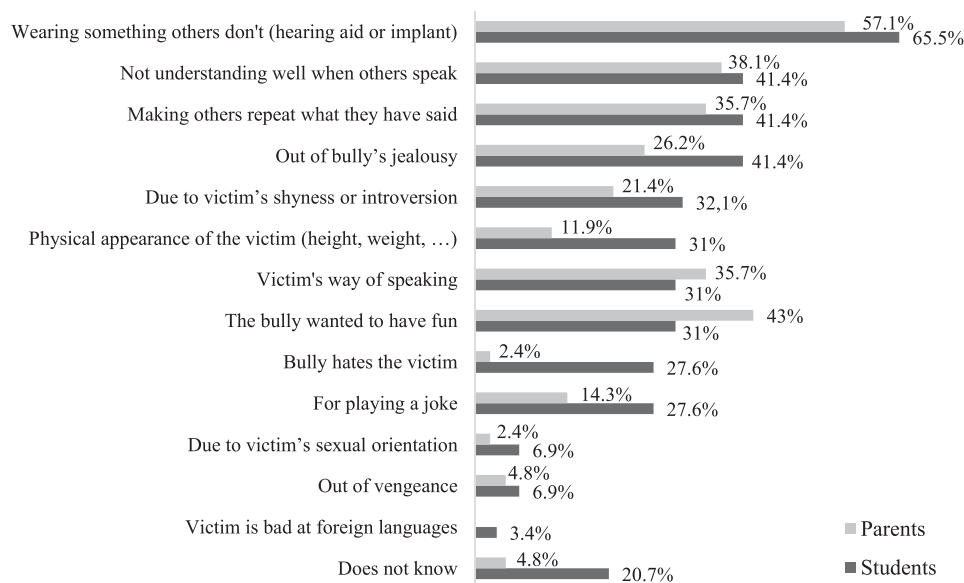


Figure 1. Reasons for victimization. Reported by the self-perceived victims and parents.

Procedure

The study was submitted for review and approval by the first authors' Bioethics Committee at their University and AICE. The online questionnaires were implemented in LimeSurvey (Limesurvey GmbH., 2003). This online survey tool has its own repository for participants' answers and allows researchers to download a data sheet in .sav format. Before implementing the survey, both questionnaires were pilot tested to ensure parents and students were able to correctly understand all items. Five students and five parents were interviewed in person, and another five of each group were asked to fill an online version of the questionnaire. As a result of this first pilot, the writing of two items was revised as participants stated difficulties in their understanding. The difficulties were related to the wording of the question about perceiving the bullying case to be solved, and to some of the options proposed in perceived reasons for victimization. Both items were rewritten with the help of all 20 pilot participants, until they all agreed there were no difficulties in understanding. These participants were not included in the final study and data analysis.

Access to the online platform was possible through a link available at the AICE website and associated social networks. In order to encourage participation in the study, several parallel initiatives were carried out. A letter to the families was sent by e-mail to the members of AICE; and a specific section was included both on the website and through the association's social networks. The letter contained information about the study including its objectives and details, and an informative article was included in one of the issues of the magazine published by AICE. Emphasis was placed on the voluntary and anonymous nature of the participation, as well as on the confidentiality of all responses. Once the data were collected, they were managed in accordance with the Spanish law on data protection (Organic Law 3, 2018 of 5 December on the Protection of Personal Data and the Guarantee of Digital Rights).

Statistical Analysis

First, a descriptive analysis was carried out to detect inconsistencies or contradictory response patterns and missing values. It

was decided not to accept more than 1% of missing values in the paper survey, whereas the online version did not allow for any blank response. The EBIP-Q and ECIP-Q (first block) were coded in such a way that answers of at least "once or twice a month" during the last two months counted as involvement for both victimization and perpetration. This is the same criteria used by the original Spanish adaptation of the scale (see Ortega-Ruiz et al., 2016 for more details). On the other hand, people answering positively to direct questions about having felt victimized (in the second block) were considered as "self-identified victims", whether they answered "Yes, once in my life", "Yes, during the last year", or "Yes, at the present time". The set of items regarding the reasons behind the victimization and methods of coping were answered by these self-identified victims only. The same criteria were applied to both the student and parent samples.

Finally, since there was no evidence so far of factorial structure of the EBIP-Q or the ECIP-Q in CI users, Confirmatory Factor Analysis (CFA) was performed to verify one-dimensional structure found by the original authors for each of the subscales (Ortega-Ruiz et al., 2016). Given the data metrics themselves and their non-normal distribution, the Unweighted Least Squares method was used, which in addition to robustness requires no further assumptions as to its distribution (Jöreskog & Sörbom, 1989). The model's goodness of fit was evaluated with the following indexes: GFI (Goodness of Fit Index), the AGFI (Adjusted Goodness of Fit Index), the NFI (Normed Fit Index) and the SRMR (Standardized Root Mean Square Residual). In accordance with the criteria of Byrne (2009) and Kline (2005), the adjustment values in the case of EBIP-Q were high for the victimization scale (GFI = .99; AGFI = .98; NFI = .98 and SRMR = .06) and for the perpetration scale (GFI = .99; AGFI = .97; NFI = .94 and SRMR = .08). The obtained values showed lesser goodness of fit for ECIP-Q, in both the victimization (GFI = .99; AGFI = .97; NFI = .94 and SRMR = .10) and perpetration scale (GFI = .95; AGFI = .92; NFI = .91 and SRMR = .10).

The analyses were performed with the IBM SPSS Statistics 24 statistical package (IBM Corp. Released, 2016) and AMOS 23 (Arbuckle, 2014) was employed for the CFA. Bivariate tabulations were carried out, with the application of contrasts χ^2 for the comparison of percentages for responses on all the

Table 1. Prevalence of traditional bullying and cyberbullying (as reported by students) with age and sex differences

Bullying	Overall	Sex			Age (years)			
		Boys	Girls	χ^2	11–14	15–17	18–23	χ^2
EBIP-Q victims	23.5%	27.5%	19.6%	.49	37.5%	2.8%	9.1%	6.44*
EBIP-Q perpetrators	8.8%	11.8%	5.9%	.49	15.6%	8.3%	0%	4.07
Self-identified victims (during last year)	5.9%	7.8%	3.9%	.17	9.7%	4.3%	4.5%	.97
Self-identified victims (prior to last year)	22.5%	23.5%	21.6%	.00	16.1%	21.7%	22.7%	.47

Cyberbullying	Overall	Sex			Age (years)			
		Boys	Girls	χ^2	11–14	15–17	18–23	χ^2
ECIP-Q victims	8.8%	13.8%	3.9%	1.95	18.8%	2.1%	9.1%	6.61*
ECIP-Q perpetrators	6.9%	11.8%	2%	2.45	15.6%	2.1%	4.5%	5.76
Self-identified victims (during last year)	2%	2%	2%	-	3.2%	2.2%	0%	.69
Self-identified victims (prior to last year)	6.9%	9.8%	3.9%	.61	6.5%	2.2%	13.6%	3.45

Note. * $p < .05$.

questionnaires and contingency coefficient for effect size. Results are presented below for the student and parent groups separately.

Results

Students

Prevalence The overall prevalence rates are presented in Table 1. Differences for sex and age were also explored and can be found in detail in Table 1. There were no significant sex differences either on the EBIP-Q or ECIP-Q nor in the self-identified victim questions. Chi-square analysis resulted in a significant difference for age with regard to the traditional victims, such that the younger group had higher rates ($\chi^2 = 6.44$; $df = 2$; $p = .04$; contingency coefficient = .25). The same occurred for age with regard to cyber victims ($\chi^2 = 6.61$; $df = 2$; $p = .04$; contingency coefficient = .25). No differences were found on the perpetration measures. There were no significant differences for sex or age in the self-identified victims (see Table 1).

Victimization behaviors The application of the EBIP-Q and ECIP-Q allowed us to gather detailed information related to the types of bullying and cyberbullying behaviors experienced by victims and their frequency (see Table 2). The most common form of traditional victimization suffered was related to verbal bullying (29% reported that someone insulted them or called them names once or more), followed by having rumors spread about them (26%). Cyber victimization showed a similar pattern, but with lower rates. The most common negative behaviors were also verbal, like saying nasty things about the victim either online or through text messages to other people (1.8%) or directly to the victim (9.8%), followed by being excluded or ignored by others in a social networking site, internet chat room, or a messenger app (9.8%).

Reasons for victimization When asked about the perceived reasons why they were victimized, the most frequently reported answer for students was “wearing something that others don’t, like a hearing aid or implant” (65.5%), followed by “not

understanding well when other people talk to me”, “making other people repeat what they have said too much”, and “out of the bully’s jealousy” (41.4% each). None of the students reported reasons that were not already included in the questionnaire, but the given option “due to ethnicity” was never selected. The full list of reasons reported and associated percentages are presented in Figure 1.

Telling and reporting Regarding who was told about the victimization, in most cases students reported to their parents (64.3%), and less frequently to their friends (35.7%) or teachers (35.7%), as presented in Table 3. When parents were told, it was the students’ belief that they spoke to the teachers (65.5%). In a similar way, students felt that teachers were more likely to speak to the victim’s parents (41.4%). Friends tended to provide emotional support (55.2%), whereas classmates did nothing (41.4%). When asked whether the bullying cases were solved, 24.1% reported that it had not been solved at all and 37.9% reported it had been poorly solved. Moreover, when asked if they had felt their own educational center tried to solve the victimization, in more than half of the cases the students reported that it was “poorly tried” (41.4%) or even “not at all” (13.8%).

Parents

Prevalence When the same temporal criteria as that for the students was applied (in this case their children suffering at least “once or twice a month” any of the behaviors mentioned), parents reported lower rates than the ones exhibited by the students (see Table 4). Similar results between parents who identified their children as victims and self-reported victims were found, but these were below the actual levels of bullying and cyberbullying during the last two months detected with the standard questionnaires applied (i.e., the EBIP-Q and ECIP-Q).

Victimization behaviors A high percentage of parents did not know how to respond to the different behaviors raised (see Table 5 for more detail), especially when it came to behaviors such as spreading rumors (34.6% in traditional bullying and 15% in cyberbullying) or social exclusion (24.4% in traditional

Table 2. Detailed information on suffered behaviors reported by students through EBIP-Q and ECIP-Q

BULLYING	Frequency				
	No	Once or twice	Once or twice a month	Once a week	More than once a week
Someone hit me, kicked me or pushed me	81.4%	14.7%	1%	2%	1%
Someone insulted me or called me names	70.6%	17.6%	4.9%	1%	5.9%
Someone said nasty things about me to others	68.6%	17.6%	7.8%	2%	3.9%
Someone threatened me	89.2%	6.9%	2.9%	1%	–
Someone stole my stuff or broke it	84.3%	12.7%	2%	1%	–
I have been excluded or ignored by others	74.5%	11.8%	8.8%	2%	2.9%
Someone spread rumors about me	73.5%	15.7%	7.8%	2%	1%

CYBERBULLYING	Frequency				
	No	Once or twice	Once or twice a month	Once a week	More than once a week
Someone said nasty things to me or called me names using texts or online messages (e.g., on WhatsApp, Snapchat, Instagram, Twitter,...)	90.2%	6.9%	2%	1%	–
Someone said nasty things about me to others either online or through text messages	89.2%	7.8%	2%	–	1%
Someone threatened me through texts or online messages	94.1%	4.9%	1%	–	–
Someone hacked into my account and stole personal information (e.g., through email or social networking accounts)	97.1%	2%	1%	–	–
Someone hacked into my account and pretended to be me (e.g., through instant messaging or social networking accounts)	97.1%	2%	1%	–	–
Someone created a fake account, pretending to be me (e.g., on Facebook, WhatsApp, Snapchat, Instagram, Twitter,...)	91.2%	5.9%	2.9%	–	–
Someone posted personal information about me online	96.1%	2.9%	1%	–	–
Someone posted embarrassing videos or pictures of me online	90.2%	7.8%	1%	1%	–
Someone altered pictures or videos of me that I had posted online	95.1%	2.9%	2%	–	–
I was excluded or ignored by others in a social networking site, internet chat room, or a messenger app	90.2%	6.9%	2.9%	–	–
Someone spread rumors about me on the Net	96.1%	2.9%	1%	–	–

EBIP-Q = European Bullying Intervention Project Questionnaire; ECIP-Q = European Cyberbullying Intervention Project Questionnaire

bullying and 23.6% in cyberbullying). For the most part, parents denied that their children had suffered direct forms of physical aggression, like pushing, hitting (89.8% said it never happened in the last two months), or having material stolen or broken (89% said it never happened in the last two months).

Reasons for victimization When asked about the perceived reasons why their children were victimized, the most frequent was “wearing something that others don’t, like a hearing aid or implant” (57.1%). The second most frequently noted reason by parents was “the bully wanted to have fun” (43%). The full list of options and the percentage of their responses is presented in Figure 1 in comparison with the students’ answers.

Discussion

The current study investigated victimization rates and responses for a unique sample of young users of CI in Spain. Parents with

child CI users were also invited to participate to explore their perspectives concerning the victimization of their children. In this context, the present study was carried out with the primary objective of promoting a better understanding of the problem of victimization (both traditional and cyber) among students with CI.

The results showed a prevalence of traditional victimization among students with CI of 23.5%, whereas 8.8% suffered cyber victimization. Regarding perpetration, the results indicate prevalence rates of 8.8% for traditional bullying and 6.9% for cyberbullying. The rates reported here were higher than those obtained in the same country (Spain) by another study using the same instruments with the general population whose hearing status was not checked (Sastre et al., 2016), whereas more recent research reported an increase in the traditional bullying rates (Rodríguez-Hidalgo et al., 2019). It was estimated for the general population aged 12–16 years old, that 9.3% suffered traditional victimization, 6.9% suffered cyber victimization, whereas 5.4%

Table 3. Telling and problem-solving behavior reported by the self-perceived victims

Who is told about the victimization? (could mark more than one)	Total
Parents	64.3%
Friends	35.7%
Teachers	35.7%
Siblings	25%
Another family member	10.7%
Not told anyone yet	21.4%
How long does it take to tell others of the victimization?	Total
Less than a week	44.4%
Several weeks	14.8%
Several months	33.3%
Not told anyone yet	7.4%
How parents react to bullying? (could mark more than one)	Total
Talking to the teachers	65.5%
Giving emotional support	55.2%
Speaking with perpetrator's parents	41.4%
Suggesting school transfer	20.7%
Downplaying importance	10.3%
Not believing their children	10.3%
Doing nothing	3.6%
How teachers react to bullying? (could mark more than one)	Total
Speaking to victim's parents	41.4%
Speaking to perpetrator's parents	37.9%
Downplaying importance	31%
Doing nothing	27.6%
Giving emotional support	27.6%
Suggesting school transfer	6.9%
Not believing the victim	6.9%
How classmates react to bullying? (could mark more than one)	Total
Doing nothing	41.4%
Giving emotional support	27.6%
Downplaying importance	24.1%
Alerting the teachers	20.7%
Making fun of the victim	20.7%
Alerting the victim's parents	10.3%
Suggesting school transfer	6.9%
Not believing the victim	6.9%
How friends react to bullying? (could mark more than one)	Total
Giving emotional support	55.2%
Doing nothing	27.6%
Alerting the teachers	20.7%
Making fun of the victim	10.3%
Downplaying importance	10.3%
Not believing the victim	10.3%
Alerting the victim's parents	10.3%
Suggesting school transfer	3.4%
Do the victims think their bullying case was solved?	Total
Mostly	24.1%
Quite	13.8%
Poorly	37.9%
Not at all	24.1%
The school intended to solve the bullying case?	Total
Mostly	13.8%
Quite	31%
Poorly	41.4%
Not at all	13.8%

were traditional bullies, and 3.3% were cyberbullies (Sastre et al., 2016). In a population aged 11–18 years old, it has been reported that the rates rise to 20.5% for traditional victimization and 5.5% for traditional perpetration, whereas 13.8% were bully-victims (i.e., individuals who both bully and are victimized at the same

time; Rodríguez-Hidalgo et al., 2019). No recent national study has explored cyberbullying prevalence for the whole of Spain, and the rates found in local studies vary so substantially that it has been advised to not extrapolate them for the whole country (Zych et al., 2016). Although bullying seems to be an important

Table 4. Prevalence of traditional bullying and cyberbullying victimization (as reported by parents)

Bullying		Cyberbullying	
EBIP-Q victims	8.6%	ECIP-Q Victims	2.4%
Identified their children as victims (during last year)	5.5%	Identified their children as victims (during last year)	.8%
Identified their children as victims (prior to last year)	26.8%	Identified their children as victims (prior to last year)	7.9%

EBIP-Q = European Bullying Intervention Project Questionnaire; ECIP-Q = European Cyberbullying Intervention Project Questionnaire

Table 5. Rates of bullying and cyberbullying victimization reported by parents

Bullying	Frequency					
	No	Once or twice	Once or twice a month	Once a week	More than once a week	I do not know
Someone hit, kicked or pushed my child	89.8%	3.1%	1.6%	–	–	5.5%
Someone insulted or called her/him names	67.7%	9.4%	.8%	–	1.6%	20.5%
Someone has said nasty things about her/him to others	55.1%	7.1%	.8%	–	2.4%	34.6%
Someone threatened my child	89%	1.6%	–	–	.8%	8.7%
Someone stole her/his stuff or broke it	89%	5.5%	–	–	–	5.5%
Has been excluded or ignored by others	50.4%	20.5%	3.1%	.8%	.8%	24.4%
Someone spread rumors about her/him	52.8%	11%	0.8%	–	.8%	34.6%

Cyberbullying	Frequency					
	No	Once or twice	Once or twice a month	Once a week	More than once a week	I do not know
Someone said nasty things or called her/him names using texts or online messages (e.g., on WhatsApp, Snapchat, Instagram, Twitter,...)	78.8%	7.1%	–	–	.8%	13.4%
Someone said nasty things about my child to others either online or through text messages	68.5%	5.5%	–	.8%	.8%	24.4%
Someone threatened her/him through texts or online messages	87.4%	1.6%	.8%	–	–	10.2%
Someone hacked into her/his account and stole personal information (e.g., through email or social networking accounts)	89.8%	.8%	–	.8%	–	8.7%
Someone hacked into her/his account and pretended to be my child (e.g., through instant messaging or social networking accounts)	90.6%	.8%	–	.8%	–	7.9%
Someone created a fake account, pretending to be my child (e.g., on Facebook, WhatsApp, Snapchat, Instagram, Twitter,...)	88.2%	.8%	.8%	–	–	10.2%
Someone posted personal information about her/him online	84.3%	1.6%	–	–	–	14.2%
Someone posted embarrassing videos or pictures of my child online	91.3%	–	.8%	–	–	7.9%
Someone altered pictures or videos of her/him that she/he had posted online	87.4%	1.6%	–	–	–	11%
He/she was excluded or ignored by others in a social networking site, internet chat room, or a messenger app	71.7%	3.9%	–	.8%	–	23.6%
Someone spread rumors about my child on the Net	81.9%	2.4%	.8%	–	–	15%

issue for students with CI in Spain, studies documenting bullying rates in the general population show that this problem is not unique to CI users.

Regarding the literature available with DHH samples, the findings of the present study are lower compared to previous studies (Broekhof et al., 2018; Brunnberg et al., 2018; Cheng et al., 2019; Ernsen, 2016; Warner-Czyz et al., 2018). This could be a result of the age range sampled, since none of the mentioned studies assessed university students.

There were no sex differences for prevalence rates between boys and girls; however, the results do suggest that bullying

was more of a problem for the children and teenage users of CI compared to the university student users. This could also explain the disparities found with previous studies, as bullying rates are higher in the present study among the younger age groups. It is worth mentioning that there were no traditional bullying perpetrators but only victims (9.1%) among the university students. Given the small sample size, this may be an anomaly of the sample and not a generalizable result, since research with university samples have pointed out that perpetration levels in these contexts, although low, are nonetheless present (Pörhölä et al., 2019). Even if the rates are lower than in other educational

levels, the current victimization rate (almost one in ten) means bullying prevention and intervention efforts still need to be implemented at the university level.

It is also worth mentioning that a visual comparison allows to perceive a notable change on the bullying rates depending on the means of assessment (i.e., standardized assessment questionnaire versus direct questions requiring victims to self-identify as such). Rates drop from 23.5% to 5.9% for traditional bullying and from 8.8% to 2% for cyberbullying when students were asked specifically with as single item if they felt they were the victims of school bullying or cyberbullying during the previous year. This can be a sign of the difficulties identifying bullying even by the victims themselves (Dalton, 2011). A recent meta-analysis found that studies applying a multi-item tool obtained higher bullying percentages than those using a single item, at the same time reporting that such multi-item measurements seemed more accurate (Zych et al., 2016). Notwithstanding, it must be noted that the questionnaires (EBIP-Q and ECIP-Q) employed different time criteria than the direct questions, so that the former investigated the previous two months whereas the latter were reported during the last year. Therefore, it cannot be ascertained whether the problem is the current methodology or a real difficulty in detecting bullying. Further research is needed to assess this issue and determine the utility of self-selection in victimization research versus standardized measurement tools.

Regarding the perception parents have about their children's victimization experiences, they seemed to be underestimating it. A visual comparison of the youth and parent data suggest a notable change for the bullying rates, especially when it came to cyberbullying. The ECIP-Q showed that up to 8.8% students had been cyberbullied during the previous 2 months, yet only 2.4% of the parents reported such a situation in their version of the ECIP-Q. This seems consistent with research stating that adults tend to be unaware of bullying unless they are told by the children themselves (Matsunaga, 2009).

When asking self-identified victims about the details of the bullying they had experienced, the most frequently perceived reason was wearing something that other people do not wear (an implant or hearing aid), followed by the victim not understanding well when other people talked and having to ask others to repeat what they had said. These reasons encompass many of the problems associated with wearing a CI, suggesting that victims may have interpreted the reason for their victimization as relating to this. Indeed, this has been noted in previous literature, which suggests that physical or social differences may predispose an individual to becoming a target (Hoover & Stenbjem, 2003; Pinguart, 2017; O'Moore, 2010), with some studies directly pointing out difficulties linked to hearing (Bauman & Pero, 2010) or wearing a visible aid (Cheng et al., 2019). Therefore, it is always advisable to explicitly address and promote the acceptance of physical and social differences in bullying prevention programmes. There is also a need to raise awareness about the social challenges children who are DHH experience in academic contexts, as well as promoting supportive peer cultures in general (Farmer et al., 2015). Other students should be encouraged and taught how to engage with their classmates who are DHH or CI users, as they may need to speak to them more slowly or in a manner that they can be easily heard. This would not only decrease their victimization, but would also encourage their inclusion as part of the community. Social skills such as empathy and cooperation have proven to be associated with defending others (Jenkins et al., 2016) and lower levels of bullying (Mitsopoulou & Guivazolias, 2015), so promoting this kind of skills is recommended regardless of the reasons behind

the victimization. Furthermore, the victimization experience of DHH was not only linked to their hearing status, since reasons such as "out of the bully's jealousy" were reported by 41.4% of the victims, and "bully wanted to have fun" in 31% of the cases.

In terms of to whom victims were reporting their negative experiences, parents were the most popular. This contrasts with previous research among the general population, where victims were most likely to turn to friends or classmates for help (Defensor del Pueblo, 2007; Rigby, 2017). The current study does however coincide with studies in the wider area of children with SEN (Hartley et al., 2017). For the CI users in the current study, telling their parents seemed to be a good strategy because in most cases the students felt their parents tried to help them, be it by speaking with teachers (65.5%), giving emotional support (55.2%), or speaking with the bully's parents (41.4%). Teachers seem to react in a parallel way, with 41.4% resorting to speak with the victim's parent, and 37.9% speaking with the bully's parents. On the other hand, the reaction of their classmates in almost half of the cases was inaction (41.4%). It should also be added that 24.1% of the victims felt that their classmates downplayed the victimization experience and sometimes even made fun of their already victimized peers. The most common attitude among friends was one of emotional support, but the second one was doing nothing. Furthermore, 21.4% of the victims claimed to have not told anyone about the victimization, hence making it difficult for them to receive help and put a stop to the bullying. It follows from this and existing research that children require encouragement and support to engage in help-seeking behaviors if needed, since adults could be unaware of the bullying situation unless they are told about it (Matsunaga, 2009), and some researchers have indicated that adult intervention is the most efficient way to end a victimization (Bjereld et al., 2019; Didaskalou et al., 2016). At the same time, parents need to learn how to proactively detect and tackle bullying in the best possible way since their children may be too embarrassed or worried to talk to them (O'Moore, 2010).

It is also worth noting that 10.7% resorted to other figures besides parents, friends, teachers, or siblings. When specifying who that person was, it was someone from their own family (i.e., a cousin, a grandparent), but no one reported telling the school counselor, a mandatory figure in every Spanish school. Didaskalou et al. (2016) had found in their study that students did not seek support from the school counselor, as they did not identify such a figure as effective in tackling bullying. This may be an indicator of an educational need to better train counselors in how to address bullying, and to transmit to the students that, precisely, one of the most important functions of the school counselor is acting in cases of bullying. Receiving such a training in their preservice education could also be beneficial for all teachers, as they are the main figures to whom parents in our sample approach when they know their children are being bullied, but 31% of the victims reported their teacher downplayed the importance of the bullying and 27% indicated that they did nothing. Following Bauman and Pero (2010), this training should be provided regardless of the hearing status of their students.

Limitations of the Present Study and Future Lines of Research

This study provides an important contribution to existing bullying literature but a more important one to the specific population it is concerned with, since studies incorporating

students who use CI are unfortunately quite limited. We would argue that future research is needed within this group so that efforts to reduce and prevent victimization of vulnerable students are advanced. Although valuable, the present study presents some limitations worth mentioning. Firstly, due to difficulties in accessing such a distinctive sample, the final sample was small and a nonprobability sampling method was employed, making it difficult to generalize the current results to the wider population. Secondly, one of the objectives of this research was to focus on the experience of victimization, but the perpetration scale in the questionnaires showed quite high rates that have not been addressed. It would be of great interest to explore the characteristics and reasons behind the perpetration in future research. Thirdly, using different temporal criteria for self-reports (at present, during last year or once in their lifetime) than the one used in the questionnaires (EBIP-Q and ECIP-Q; last two months) makes the results less comparable. On the one hand, the self-report as victim was employed as a filter to ask individuals to fill the items characterizing the bullying suffered, so the time criteria was broad to facilitate accessing a larger sample of victims. On the other hand, both EBIP-Q and ECIP-Q were applied with the same time criteria proposed by the original authors (Del Rey et al., 2015; Ortega-Ruiz et al., 2016), so they could be entirely comparable with the national literature applying them. Although these time frames still provided evidence of an underestimation of bullying by the victims themselves, matching the two criteria in future research may allow the extent of the underestimation to be determined. Fourthly, the present study did not collect information about the primary language or the level of language access of the participants with CI. This sort of information could lead to a better understanding of the sample and be relevant to better comprehend their bullying experience. Finally, this study focused on CI users, but future research including DHH students who are not CI users as a comparison group could serve to assess whether wearing CIs or the hearing status lead to differences in bullying involvement.

Conclusions

Overall, the results obtained show that bullying is a problem of special prevalence for students with CIs, with 23.5% suffering traditional victimization and 8.8% suffering cybervictimization. These results are similar to the international literature and a fact that cannot go unnoticed by educators or families. Yet, the literature shows that this problem is not unique to CI users and seems to be increasing. We would argue that there is a need for greater effort in terms of social awareness and support, not only to this vulnerable group, but to every student regardless of their hearing status. There seems to be a need for training and preparing the teachers and school counselors to effectively tackle bullying, as well as parents and families. The associations of families of CI users could be a good starting point to provide such training and the much-needed support for the CI users victims and their families.

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Conflicts of Interest

No conflicts of interest were reported.

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