Eur J Psychol Educ (2013) 28:725–745
DOI 10.1007/s10212-012-0137-2

The role of Internet use and parental mediation on cyberbullying victimization among Spanish children from rural public schools

Raúl Navarro · Cristina Serna · Verónica Martínez · Roberto Ruiz-Oliva

Received: 30 January 2012 / Revised: 2 April 2012 / Accepted: 30 May 2012 /
Published online: 19 June 2012

Abstract Cyberbullying victimization research on individual and familial correlates is scarce in Spain. By building upon previous studies, this research examines the role of Internet usage and parental mediation in online victimization. Spanish children from rural public schools (10–12 years; $n=1068$) completed a self-report questionnaire which measured being cyberbullied, Internet use and parental mediation strategies. Logistic regression analyses examined the association among cyberbullying victimization, online activities, intensity and purposes of online communication, and restricting, evaluating and co-using parental mediation. The results show that Internet use, specifically online communication, increases the likelihood of cyberbullying victimization. Conversely, monitoring software installed on the computer, joint creation of rules regarding the time spent online and personal information shared help lessen the likelihood of online victimization. The results are examined in the light of previous research, while implications for practice and future research are considered.

Keywords Cyberbullying · Victimization · Internet use · Online communication · Parental mediation

Introduction

Internet use has increased remarkably in the last decade. In Spain, 92.6 % of children/adolescents (aged 10–16 years) are computer users, and 78.0 % are Internet users. The average age of first Internet access is 10–11 years. Furthermore, half the Internet users connect daily, and over a third use the Internet 2–3 days a week (Inteco 2009). Increased Internet access is not surprising considering that users find vast amounts of information, and

R. Navarro (✉) · C. Serna · V. Martínez
Department of Psychology, Faculty of Education and Humanities, University of Castilla-La Mancha, Avda de los Alfares, 42, 16071 Cuenca, Spain
e-mail: Raul.Navarro@uclm.es

R. Ruiz-Oliva
Málaga University, Faculty of Communication Science, Málaga, Spain

the possibility of connecting with existing relationships (e.g., family and friends) and developing new relationships (Chou et al. 2005). Despite positive Internet features, cyberspace exposes young people to many online risk behaviors: loss of privacy, access to inappropriate material (e.g., pornography), Internet grooming, and aggressive and hostile interactions with peers and adults (Subrahmanyam and Šmahel 2011).

Concern about the Internet's potential for cyberbullying victimization among children is growing among researchers, parents and educators given the consequences of these negative interactions for children's psychosocial functioning. Cyberbullying victimization has been correlated with high levels of distress (Juvonen and Gross 2008), social anxiety (Dempsey et al. 2009), low self-concept (Katzer et al. 2009) and depressive symptoms (Ybarra et al. 2005).

Cyberbullying has been defined as "any behavior performed through electronic or digital media by individuals or groups that repeatedly communicate hostile or aggressive messages intended to inflict harm or discomfort on others" (Tokunaga 2010, p. 278). Despite comparing prevalence data about cyberbullying victimization being difficult given the definitional and methodological differences among studies (Dehue et al. 2008), international rates of children reporting victimization in cyberspace range from 20 to 40 % (Tokunaga 2010). The prevalence rates in Spain vary across studies. In a study with 1431 Spanish adolescents, Estévez et al. (2010) reported that 30.1 % suffered cyberbullying, and Buelga et al. (2010) reported 29.0 % in a survey with 2101 adolescents.

Research on cyberbullying victimization is now attempting to understand the individual and familial correlates associated with this kind of cyberaggression to identify key recommendations to prevent it. Consequently, the present study was planned to enhance our comprehension about variables linked with cyberbullying victimization, principally with Internet use and the mediation strategies used by parents to reduce children's online risk experiences.

Cyberbullying and Internet use

Children and youths use the Internet for seeking information, studying, watching videos and listening to music. However, the rapid rise in Internet social communication technologies (i.e., social networking sites, instant messaging, chat rooms and email) has made the Internet a new field for social relationships.

Research on Internet activities has demonstrated that online communication has both positive and negative effects on children and adolescents via self-disclosure experiences on the Internet. Therefore, previous findings suggest that Internet communication with existing friends via offline social networks positively relates with quality relationships and well-being (Valkenburg and Peter 2007a). Nonetheless, there is growing evidence that disclosure of personal information also exacerbates online risks such as cyberbullying (Livingstone and Brake 2009; Walrave and Heirman 2011; Ybarra et al. 2007).

Cyberbullying research clearly evidences that cyberbullying victims use the Internet more than non-victims (Aricak et al. 2008; Smith et al. 2008; Topçu et al. 2008). Furthermore, compared to non-victims, cybervictims report higher rates of chatting, e-mailing, web-surfing, blogging, gaming and sending instant messages (Smith et al. 2008; Walrave and Heirman 2011; Ybarra and Mitchell 2004).

The literature on online communication suggests that youths mostly communicate online with existing social networks, but others go online to find new friends and to compensate for their lack of social skills in offline settings (Gross 2004; Lee 2009). For example, a cyberbullying study has demonstrated that the individuals who used the Internet for finding new friends or chatting with strangers experienced more online victimization than those who did

not (Akbulut et al. 2010). Accordingly, being a cyberbullying victim may be predicted by both Internet activities and online communication. Certainly, it is important to investigate online communication purposes (maintain existing friends, meeting new people) as possible predictors of victimization, but research analyzing this relationship is limited.

Cyberbullying and parental mediation

Cyberbullying is a fairly new phenomenon, but concern for this problem is growing very quickly among researchers, and also among educators and parents who often do not know how to respond adequately to these negative online interactions (Bauman 2010). Therefore, the Spanish study on safe habits for children's and adolescents' Internet use (Inteco 2009) found that 59.7 % believed that public administrations should attempt to make the Internet safer, while 56.2 % thought schools should train children in safe Internet use. Despite these perceptions, 70.4 % of the parents and 67.4 % of the children participating in this study reported they had rules on Internet use, rules which, in most cases, limit Internet connection days (64.1 % of families) and the time spent (59.6 %). Fewer families control access to violent/sexual content (around 10–12 %) and recommend not chatting with strangers (15.8 %).

Rules on Internet use are one approach used by parents to mediate their children's online activities. These parental mediation strategies refer to the parental management of the relationship between children and the media (Livingstone and Helsper 2008). Parental mediation comprises different forms of management, categorized as follows: 1) restrictive mediation that includes parents' strategies to control the web sites visited or the software installed by children, and use of electronic devices limiting content and the web sites visited; 2) evaluative mediation relates with the joint creation of rules on personal information children should not share, on the amount of time spent on Internet use, and the web sites that can or cannot be visited. Unlike the first type, the second form involves adolescents' active participation in creating these rules (Mesch 2009); 3) co-using implies parents' active participation while children are online, advising and helping about Internet use, recommending web sites or participating in online activities with children (Lee and Chae 2007).

While there is a well-established body of research on the impact of parental mediation on TV and Internet use (Livingstone and Helsper 2008; Van Den Eijnden et al. 2010), few studies address parental mediation and its impact on cyberbullying victimization. Dehue et al. (2008) asked 831 parents with children attending primary and secondary schools whether they had Internet use rules. They found that 60 % of parents usually set rules about Internet use frequency for their children, and 80 % set rules about what children are allowed to do on the Internet. However, they concluded that despite these rules, parents were not really aware of Internet harassments.

To address the impact of parental mediation strategies on the odds of online victimization, Mesch (2009) surveyed the parents of 935 adolescents aged 12–17 years. Parents were asked about three restrictive strategies and three evaluative strategies that they could use to mediate and monitor youths' Internet activities. The results of the potential protective effect of parental mediation on cyberbullying victimization showed that only monitoring the web sites visited by children (restrictive mediation technique) and the existence of rules on the sites that children are allowed to visit (evaluative mediation technique) lowered the risk of victimization.

Thus, although little is known about the protective effect of parental mediation on online victimization, cyberbullying research should continue to analyze this relationship.

The current study

Spanish studies that focus on the above variable are still scarce. By building upon previous research, with a Spanish sample, the current study tests the assumption that different Internet activities (e.g., chatting, web-surfing, e-mailing) and online communication positively relate to cyberbullying victimization. Based on previous works (Bonetti et al. 2010; Valkenburg and Peter 2007a), this study also analyzes the relationship between cyberbullying victimization and online communication purposes. We explored whether children with out-of-home Internet access or who share a computer in a common space are exposed to cyberbullying to a greater or lesser extent. Based on the above research, we hypothesize that Internet activities and cyberbullying victimization will be positively related. Likewise, online communication is expected to increase the likelihood of cyberspace victimization, although not all online communication purposes have an effect on cyberbullying.

Regarding parental mediation, based on the work by Mesch (2009), this study investigates the possible protective effect of the restrictive and evaluative mediation techniques perceived by children by adding a third mediation type, co-using, which Mesch's study did not include. Parental mediation strategies are expected to lower the likelihood of cyberbullying victimization.

Basically, this article aims to increase our knowledge of children's Internet use, perceived parental mediation techniques and their relationship with cyberbullying victimization. This study extends the existing literature as follows: analyzing previously identified cyberbullying correlates in a Spanish sample of children from a rural area; contributing to the database for children under 12 since most cyberbullying studies include study samples older than 12; focusing on multiple ways of online communication and communication purposes; and using three different parental strategies perceived by children.

Method

Sample and procedure

Our sampling frame consisted in a complete list of 62 primary schools in the province of Cuenca, a middle class rural area in Spain. The province of Cuenca was chosen for several reasons: (a) schools in this province are involved in a large educational technology integration project which, through the Regional Government, provides a free laptop to students in years 5 and 6. Students can take the laptop home, and they have Internet access at school; (b) according to INE (the Spanish National Institute of Statistics), Internet access in Castilla-La Mancha (the region where Cuenca is located) has increased by 30 % in recent years, and around 81 % of homes currently have Internet access (INE 2010). Indeed, Cuenca is the province with the largest number of homes with Internet access in Castilla-La Mancha when, comparatively, it has always been last in the region; and (c) no studies about cyberbullying have been systematically conducted in this province, although a preliminary analysis carried out in a study about school bullying showed that cyberbullying should be analyzed in more detail.

Sample size was calculated following the formula by Daniel (1999) by considering a Z value of 1.96 (95 % confidence interval) and a 3 % error margin. Since we were unable to obtain the prevalence estimation of cyberbullying from previous studies as no studies have been conducted in the province, we considered an expected proportion (P) of 0.5 by following the criteria described by McNeil (1996). For the analysis, we also took into

account that according to the Regional Castilla-La Mancha Government's statistical data (JCCM 2010), the student population in the 2009/2010 academic year was 1954 for year 5 and 2025 for year 6 (a total number of 3979 students). The analysis determined that 847 participants were required for the study. To achieve the *a priori*-determined sample size of 847 students, we contacted the director of each school using our ram-list of primary schools. We intentionally oversampled by randomly selecting 1225 potential participants who (1) had received their parents' permission to participate (143 students did not obtain parental consent to participate) and (2) were attending school at the time the research was done. A total of 1082 students completed the instruments (88 % response rate). Before the analysis, all the data were checked for missing values. Participants were required to provide valid data for all the study variables. Fourteen cases were excluded as some data were missing in some measures. Thus, the final number of participants with full records for the variables included for the analysis was 1068 schoolchildren (548 males and 520 females) from 11 public schools located in different villages in the province of Cuenca. Participants' ages ranged from 10 to 12 years (mean age 11.4 years; SD 0.70). Of these, 496 children (46.4 %) were in year 5 (aged 10–11), and 572 were in year 6 (aged 11–12).

Data were collected by self-reported questionnaires through group administration in classrooms handed out 6 months after the 2010/2011 academic year began. Participants were voluntarily asked to participate in a study on Internet use. The students who returned signed forms with their own and their parent's written consents participated. Questionnaires were anonymous, thus preserving confidentiality. Two researchers administered questionnaires to the participants, clarified certain items and answered questions. The procedure took approximately 35 min.

Instruments

Cyberbullying victimization experiences

Students were provided with the Tokunaga (2010) definition of cyberbullying victimization. After reading the definition, they indicated how often they had become victims of different behaviors over the Internet in the last 6 months using a ten-item self-report measure. Items were scored on a 5-point scale (1 = Never, 2 = Once a month, 3 = Once a week, 4 = Once a day, 5 = Several times a day). The cyberbullying victimization items were devised by using the Spanish measure *"Escalas de victimización a través de Internet —Internet Victimization Scales"* (Buelga et al. 2010). Example items were "They have told lies or rumors about me", "Photos or videos of me or my family have been posted or manipulated without my consent", and "They have said, send or done dirty things to annoy me". The internal consistency coefficient (Cronbach's alpha) was .80 for the entire present sample.

A principal components analysis (PCA) with Oblimin rotation was conducted on all ten items. The Kaiser–Meyer–Oklin value index was .83, and the Bartlett's Test of Sphericity reached statistical significance ($p<.001$), indicating that the correlation matrix was suitable for the factor analysis. The PCA yielded a two-factor structure. Items with factor loadings of .40 or above were selected. The obtained two-factor solution explained 47.7 % of variance. The first factor explained 37.2 % of variance and grouped five items referring to *denigration* and *outing* (Cronbach's α=.76). The second factor also comprised five items, explained 10.5 % of variance and was related to *cyberstalking* and *online harassment* (Cronbach's α=.71). The items in each factor were labeled following the cyberbullying categories described by Willard (2006). It is necessary to note that the factor structure found in this

study differed from the one-factor structure suggested by the author who developed the instrument. Despite our two-factor structure, no composite variables were created by taking the average of each factor's items. Consequently, rather than analyzing different cyberbullying methods, the subsequent analyses were performed by categorizing participants as victims or non-victims following the criteria explained in "Results section".

Internet use

Internet access Participants were asked to indicate whether they had Internet access at home and out-of-home Internet access, and if they used the laptop provided for their schools for Internet access. Each item was coded as a dummy variable; positive responses were coded as 1 and negative responses as 0. Children also indicated in an open question where they actually connected to the Internet if not at home. Additionally, participants were asked about where the computer was located when accessing the Internet at home: a) a common area, living room or work room; b) a private area, a bedroom.

Internet activities Based on the literature, participants were asked to indicate how often they engaged in the following Internet activities: 1) visiting social networking sites, 2) e-mailing, 2) instant messaging, 3) sharing videos, 4) chatting in a chat room, 5) searching for information, 6) downloading files, and 7) gaming. Answers were given on a 5-point scale ranging from 0 = Never to 5 = Every day.

Online communication intensity Like Valkenburg and Peter (2007a), we used three items to measure online communication intensity: 1) On the last day you were online, how long did you use chat or instant messaging? 2) On the last average week day you were online, how long did you use chat or instant messaging? and 3) In the last average weekend, how long did you use chat or instant messaging? The response categories for the three items were 1 (*none*), 2 (*less than 30 min*), 3 (between *30 min and 1 h*), 4 (*between 1 and 2 h*), 5 (*between 2 and 3 h*) and 6 (*more than 3 h*). The answers to the three items were standardized. The factor analysis showed that items loaded on one factor and explained 77.33 % of variance. Finally, Cronbach's alpha was .84.

Online communication purposes The online communication purpose questions were devised by using the items developed by Peter et al. (2006). Participants were asked how often they communicated online 1) to speak with my real-life friends (maintaining relationships), 2) because I dare to say more (social compensation), 3) to belong to a group or to be a member of something (social inclusion), and 4) to make new friends (meeting people). Items ranged from 1 = Never to 4 = Almost always. To ensure that items concepts were comparable for the English version and the Spanish translated version, back-translation methods were used. The initial measure was translated from English into Spanish by a bilingual psychology researcher, and discrepancies in content, language and meaning were discussed with the authors. Finally, the measure was back-translated and compared to the original English version to ensure the concepts were the same. The same procedure was followed with all the English measures used in this study.

Parental mediation

Participants were asked how often their parents employed each strategy presented in Table 1. The six items for the parental mediation techniques employed by Mesch (2009) were used to

Table 1 The nine items related to parental mediation techniques

Restrictive mediation
My parents check the web pages that I visit on the Internet
My parents check and supervise the software that I install on the computer
My parents had installed software or filters that keep me from going to specific websites or downloading things
Evaluative mediation
My parents and I have agreed rules about the amount of time I use the Internet
My parents and I have agreed rules about the Internet sites that I can or cannot visit
My parents and I have agreed rules about the personal information that I can or cannot share on the Internet
Co-using mediation
My parents help me and advise me when I use the Internet
My parents recommend me good sites to visit.
My parents participate in online activities with me

measure restrictive and evaluative mediation. Three items were added for the co-using mediation strategies: item 1, by Livingstone and Helsper (2008); and items 2 and 3, by Lee and Chae (2007). The response categories ranged from 1 = Never to 4 = Always.

This instrument was built on previous measures about parental mediation, and there is no previous factor analysis. For this reason, an exploratory factor analysis with Oblimin rotation was conducted on all nine items. The Kaiser–Meyer–Okling value was .85, and the Bartlett's Test of Sphericity reached statistical significance ($p<.001$). These results support the factorability of the items. The PCA yielded a two-factor structure. Items with factor loadings of .40 or above were selected. The obtained two-factor solution explained 51.5 % of variance. The first factor explained 38.9 % of variance and grouped six items (restrictive and evaluative mediation items composed this factor) referring to *establishing rules* (Cronbach's $\alpha=.77$). The second factor (composed of three items) explained 12.5 % of variance and grouped the three co-using mediation items (Cronbach's $\alpha=.70$). Factor structure did not differentiate between evaluative and restrictive mediation, probably because the items refer to rules about Internet use, although some of these rules were imposed by parents and others were discussed between parents and children. However, in order to compare our results with previous research works, instead of creating composite variables with all nine items, it was important to examine restrictive, evaluative and co-using mediation individually. We used the nine items in all the subsequent analyses.

Analysis plan

The general descriptives about Internet access location and Internet use were detailed. Frequency of cyberbullying victimization was first analyzed using a restrictive criterion described in "Instruments section". The data on the distribution of participants among cybervictimization experiences were summarized as percentages. Gender, grade and Internet location access differences in the participants' classification as victims or non-victims were analyzed using a Chi square test. Student's *t*-tests were conducted to examine the differences between victims and non-victims for the independent variables (Internet activities, online communication intensity and purposes, and parental mediation strategies). The odds ratios (OR) with a 95 % confidence interval were computed by a logistic regression analysis to establish which of the above-described factors better associated with cyberbullying victimization. To obtain such information, the forward stepwise method was used in the logistic

regression analysis to eliminate the independent variables that did not determine statistically significant cyberbullying victimization. All the analyses were done with the SPSS 19.0 statistical software.

Results

Internet use: general descriptive

Table 2 contains the descriptives about Internet access at home and out-of-home Internet access where children go online. The total sample indicated having Internet access at home, and more than half reported out-of-home Internet access.

When asked about what Internet activities they spent their time on, the results reveal that, at least once a week, almost the whole sample accessed the Internet for seeking information, followed by chatting, e-mailing and visiting their profiles on social networks like Facebook, even when these networks are prohibited for youths under the age of 16. Moreover, more than half the participants reported accessing the Internet for downloading music and videos, instant messaging and online gaming. Sharing videos was the online activity with the lowest frequency among participants.

Participants were also asked to rate how long time they spent communicating online (see Table 3). On the last day, children stated they were online to chat with others for "about 30 min or more", 36.4 % indicated they communicated on the Internet for up to 3 h, while 3.7 % stated that did so for more than 3 h. On an average week day, the total median value was also "30 min or more", 30.8 % of participants reported up to 3 h, and 2.3 % chatted for more than 3 h. On an average weekend, the total median reported was "between 30 min and 1 h". The percentage of participants who communicated online between 1 and 3 h was

Table 2 Descriptive data about internet use

	Number	Percent
Access to the internet		
Internet access at home	1068	100
Home computer in a common space	578	54.2
Home computer in a private space	489	45.8
Out of home Internet access	881	82.5
School	412	38.6
Library	217	20.4
Relative's homes	131	12.3
Several public places	306	28.7
Internet activities (at least once a week)		
Social networking sites	803	75.2
E-mail	872	81.7
Instant Messages	683	64
Sharing videos web pages	400	37.5
Chat	934	87.5
Information search	1056	98.9
Downloading files	723	67.7
Online games	677	63.4

28.7 %, while the percentage of those who communicated for more than 3 h increased to 11.3 % at the weekend.

When asked about their online communication purposes (see Table 3), the results indicate that "speaking with real-life friends" was the item with the highest frequency, followed by "because I dare to say more" and "making new friends". "Belonging to a group or being a member of something" was the lowest-frequency item among children.

Exposure to cyberbullying victimization according to the study variables

Participants' categorization of victims or non-victims of cyberbullying was done by following the criterion used by Scheithauer et al. (2006) for bullying in schools. Therefore, the children who reported being a cyberbullying victim at least once a week or more for one of the ten items our scale included was classified as a victim. This criterion better fits the emphasis placed on cyberbullying as repetitive behavior (Slonje and Smith 2008).

Following this categorization procedure, 263 children (24.6 %) indicated that they had been cyberbullying victims at least once a week in the last 6 months, while 805 (75.4 %) of the participants indicated that they had been non-victims of cyberbullying. Table 2 offers the distribution of participants into victim and non-victim groups according to gender, grade and Internet access location. Chi square analyses were conducted to examine the significant differences among the study variables.

Table 3 Descriptive data about online communication

Time spent communicating online (1 = Never, 6 = more than 3 h)		
Time online/last day (M = 2.47, SD = 1.31)		
Time online/average week day (M = 2.29, SD = 3.19)		
Time online/weekend (M = 3.19, SD = 1.55)		
Online communication purposes (at least once a week)	Number	Percent
Speak with existing friends		
Never	140	13.1
Sometimes	297	27.8
Many times	251	23.5
Almost always	380	35.6
Dare to say more		
Never	540	50.6
Sometimes	237	22.2
Many times	147	13.8
Almost always	144	13.5
Belong to a group		
Never	771	72.2
Sometimes	175	16.4
Many times	72	6.7
Almost always	50	4.7
Make new friends		
Never	570	53.4
Sometimes	245	22.9
Many times	116	10.9
Almost always	137	12.8

Significant gender differences were found with more females reporting they were frequent victims than males (χ^2 (df 1) = 6.50; p<.013). Conversely, no significant differences were found among grades (χ^2 (df 1) = 0.16; p=.722), among those who share a computer or not in a common space at home (χ^2 (df 1) = 0.34; p=.569), or among those with out-of-home Internet access (χ^2 (df 1) = 0.54; p=.456).

Student's t-tests were conducted to examine the differences in Internet activities, online communication intensity, online communication purposes and parental mediation strategies between non-victims and cybervictims. The results are presented in Table 3. In comparison to non-victims, cybervictims reported higher levels of visiting social networking sites (t(1068) = −3.87, p<.001, d=−0.27), e-mailing (t(1068) = −4.96, p<.001, d=−0.35), instant messaging (t(1068) = −3.41, p<.001, d=−0.24), chatting (t(1068) = −7.05, p<.001, d=−0.51), sharing videos (t(1068) = −4.79, p<.001, d=−0.32), seeking information (t(1068) = −2.20, p<.05, d=−0.15), downloading music and videos (t(1068) = −4.62, p<.001, d=−0.32), and online gaming (t(1068) = −3.13, p<.010, d=−0.22).

Regarding online communication intensity, victims reported higher rates of talking online than non-victims (t(1068) = −6.53, p<.001, d=−0.46). The means obtained for online communication purposes were also higher for cybervictims for the three reasons examined: "daring to say more" (t(1068) = −5.91, p<.001, d=−0.40), "belonging to a group or being a member of something" (t(1068) = −3.46, p<.001, d=−0.23), and "making new friends" (t(1068) = −5.79, p<.01, d=−0.39). In contrast, non-victims reported "speaking with real-life friends" was a significantly more frequent reason for talking online to them (t(1068) = 5.39, p<.001, d=0.39).

Finally, although cybervictims reported that their parents use all the parental mediation strategies to a lesser extent than non-victims' parents, significant differences appeared for only one evaluative mediation strategy, "joint creation of rules about the personal information that I can or cannot share on the Internet" (t(1068) = 3.67, p<.01, d=0.23), and for one co-using strategy, "parents participating in online activities with children" (t(1068) = 2.07, p<.05, d=0.15).

Cyberbullying victimization, Internet use and parental mediation strategies

In order to examine the associations between independent variables (Internet use, parental mediation) and the dependent variable (cyberbullying), logistic regression analyses were applied to the data. The analyses intended to predict cyberbullying victimization on the basis of gender, grade, Internet access location, Internet activities, online communication intensity and purposes, but also analyzed the potential protective effect of the parental mediation strategies.

We present three models including measures of restrictive, evaluative and co-using parental mediation strategies. Table 4 presents the regression statistics for the first model. Cyberbullying was associated with gender (OR = 2.59), chatting (OR = 1.21), online communication intensity (OR = 1.21), online communication purposes like "daring to say more" (OR = 1.22) and "making new friends (OR = 1.13). These results indicate that the odds of cyberbullying victimization were higher for females than for males. Moreover, participation in chat rooms and those who obtained higher online communication rates were at greater risk of online victimization. Children who communicated online to seek social compensation or who wished to meet new people were also at a higher risk of victimization. Regarding the possible protective effect of restrictive parental mediation, only "checking and supervising software that children install" lowered the likelihood of cyberbullying victimization. Other factors such as grade, computer in a common space, out-of-home Internet access and participation in

Table 4 Distribution of non-victims and cyberbullying victims among gender, grade and Internet access location

	Non-victims (n=805) % (N)	Victims (n=263) % (N)
Gender		
Females	46.5 (374)	55.5 (146)
Males	53.5 (431)	44.5 (117)
Grade		
Year 5	46.1 (371)	47.5 (125)
Year 6	53.9 (431)	52.5 (138)
Computer in a common space		
Yes	54.2 (436)	52.1 (137)
No	45.8 (359)	47.9 (126)
Out-of-home Internet access		
Yes	83 (668)	81 (213)
No	17 (137)	19 (50)

online activities (social networks sites, e-mail, downloading files, online games, information searching and sharing videos) had no significant effect.

The second model (see Table 5) presents similar results to the first one and reveals that the odds of online victimization increased in gender terms (OR = 1.50), participation in chat rooms (OR = 1.22), online communication intensity (OR = 1.22), talking on the Internet for making new friends (OR = 1.20) and because they dare to say more (OR = 1.19). In this model, instant messaging was a significant predictor of cyberbullying victimization (OR = 1.13). As for evaluative parental mediation, the joint creation of rules about the time children spend online (OR = 0.85) and the joint creation of rules about the information children can share on the Internet (OR = 0.80) were found to be significant protector factors that lowered the odds of victimization. No effects were found among the other variables in the model.

In the third model, none of the co-using parental strategies lowered the likelihood of cyberbullying victimization (see Table 6). Online activities like instant messaging (OR = 1.12) and participation in chat rooms (OR = 1.23) remained significant in predicting victimization, along with online communication intensity (OR = 1.21), online communication for social compensation (OR = 1.18) and meeting new people (OR = 1.18). The other factors had no statistically significant effects (Table 7).

Overall, the data indicate that Internet activities involving some kind of online communication, such as instant messenger and participation in chat rooms, and higher online communication rates, increased the risk of cyberbullying victimization. In contrast, parental monitoring, including supervising the software installed and joint creation of rules, lowered the likelihood of online victimization (Table 8).

Discussion and conclusions

In the literature on cyberbullying, several studies have demonstrated a direct association between high rates of Internet use and online victimization. Few studies have examined the potential protective role of parental mediation on online victimization, but their results indicate the importance of parents engaging in monitoring and discussing online activities. This study tested these previous results with a sample of Spanish children from rural public

Table 5 Mean differences in the study variables according to the classification as victims or non-victims of cyberbullying

Variables	Range	Non-victims (n=805)		Victims (n=263)	
		M	SD	M	SD
Internet activities					
Social networking sites	0–4	1.78	1.45	2.17	1.40
E-mail	0–4	1.60	1.24	2.04	1.26
Instant Messages	0–4	1.33	1.36	1.67	1.42
Sharing videos web pages	0–4	0.71	1.17	1.13	1.43
Chat	0–4	2.12	1.39	2.79	1.20
Information search	0–4	2.43	1.12	2.61	1.26
Downloading files	0–4	1.49	1.41	1.97	1.51
Online games	0–4	1.38	1.39	1.70	1.50
Online communication intensity	1–6	2.51	1.17	3.06	1.18
Online communication purposes					
Speak with existing friends	1–4	3.12	0.94	2.72	1.07
Dare to say more	1–4	1.79	1.02	2.24	1.18
Belong to a group	1–4	1.39	0.77	1.59	0.90
Make new friends	1–4	1.73	0.99	2.16	1.18
Restrictive parental mediation					
Parents check sites visited	1–4	2.28	1.12	2.23	1.09
Parents check software installed	1–4	2.43	1.24	2.30	1.18
Filter installed in the computer	1–4	1.51	0.97	1.45	0.95
Evaluative parental mediation					
Rules on time online	1–4	2.49	1.20	2.49	1.17
Rules on sites visited	1–4	2.70	1.17	2.57	1.18
Rules on information-sharing	1–4	1.56	0.95	1.36	0.73
Co-using parental mediation					
Parents advise and help	1–4	2.33	1.11	2.32	1.11
Web site recommendation	1–4	2.74	1.15	2.69	1.12
Participation in online activities	1–4	1.52	0.91	1.40	0.76

schools by focusing on several Internet activities and on communication purposes, and by adding co-using mediation strategies to analyze the influence of parental mediation on cyberbullying.

The descriptive results indicate that this sample shows low to average levels of Internet use and online communication intensity. Nevertheless, our data suggest that Spanish children in a rural context take advantage of information and communication technologies to keep in contact with other people. These results agree with previous studies that found equivalent levels and participation characteristics in different Internet activities among adolescents (Gross et al. 2002) and children (Lee and Chae 2007).

The results of the relationship between the study variables and cyberbullying victimization prevalence reveal that females, in line with previous research (Li 2006), are more likely to be cyberbullying victims than males. Victims were found to spend more time on the Internet engaged in all the online activities examined (e.g., e-mailing, chatting, instant

Table 6 Logistic regression model predicting the associations among Internet use, online communication and restrictive parental mediation

	B	S.E.	Wald	OR	95 %C.I.	
					Lower	Upper
Gender	0.46	0.16	8.18	1.59**	1.15	2.19
Grade	0.29	0.16	3.13	1.33	0.97	1.83
Computer in a common space	0.15	0.15	1.02	1.16	0.86	1.57
Out-of-home Internet access	−0.13	0.19	0.46	0.87	0.59	1.29
Social Networking sites	−0.11	0.07	2.38	0.89	0.76	1.03
E-mail	0.10	0.06	2.47	1.11	0.97	1.26
Instant Messages	0.11	0.06	3.53	1.12	0.99	1.26
Sharing videos web pages	−0.10	0.06	2.51	0.90	0.79	1.02
Chat	0.19	0.18	5.47	1.21**	1.03	1.43
Information search	0.03	0.06	0.22	1.03	0.90	1.18
Downloading files	0.04	0.06	0.61	1.04	0.93	1.17
Online games	0.05	0.05	0.78	1.05	0.93	1.18
Online communication intensity	0.19	0.06	8.62	1.21**	1.06	1.37
Speak with existing friends	0.10	0.09	1.19	1.10	0.92	1.32
Dare to say more	0.20	0.07	6.78	1.22**	1.05	1.42
Belong to a group	−0.02	0.10	0.07	0.97	0.79	1.18
Make new friends	0.17	0.08	4.69	1.13*	1.01	1.39
Parents check sites visited	0.14	0.08	3.25	1.15	0.98	1.35
Parents check software installed	−0.18	0.07	5.86	0.83**	0.72	0.96
Filter installed in the computer	0.15	0.08	3.42	1.16	0.99	1.37
Constant	−2.85	0.63	26.54	0.05***		
−2 LL	1072.99					
Nagelkerke R^2	0.157					

Model χ^2=119.28; *df*=20; $p<.001$, n=1068

B coefficient, *S.E.* standard error, *OR* odds ratio, *C.I.* confidence interval, *LL* log likelihood

*$p<.05$; **$p<.01$; ***$p<.001$

messaging, etc.) and being online because they dare to say more than in the offline context, or because they want to belong to a group and make new friends. These results are consistent with previous studies, indicating that those children who spend more time on the Internet are more likely to become a cyberbullying victim (Smith et al. 2008; Ybarra and Mitchell 2004). Additionally, past research has suggested that online communication increases the chances of becoming a target of cyberbullying (Twyman et al. 2010), and even more so when subjects talk with people they have known online (Walrave and Heirman 2011). Regarding parental mediation strategies, victims reported that their parents display lower rates of restrictive, evaluative and co-using strategies than non-victims' parents, which is consistent with previous findings (Mesch 2009).

According to the logistic regression results, and as hypothesized, some of the Internet activities analyzed and online communication intensity were found to positively relate with cyberbullying victimization. Specifically, frequent online communication and high use of Internet communication tools like instant messenger and chat rooms increase the risk of

Table 7 Logistic regression model predicting the associations among Internet use, online communication and evaluative parental mediation

	B	S.E.	Wald	OR	95 %C.I.	
					Lower	Upper
Gender	0.41	0.16	6.45	1.50**	1.09	2.07
Grade	0.28	0.15	3.14	1.32	0.97	1.81
Computer in common space	0.11	0.15	0.53	1.11	0.83	1.50
Out-of-home Internet access	−2.10	0.19	1.13	0.81	0.55	1.19
Social networking sites	−0.09	0.07	1.70	0.90	0.78	1.05
E-mail	0.10	0.06	2.39	1.10	0.97	1.26
Instant Messages	0.12	0.06	4.33	1.13*	1.08	1.27
Sharing videos web pages	−0.09	0.06	2.23	0.91	0.80	1.03
Chat	0.20	0.84	5.85	1.22**	1.03	1.44
Information search	0.02	0.06	0.10	1.02	0.89	1.17
Downloading files	0.06	0.06	1.20	1.06	0.95	1.20
Online games	0.06	0.05	1.08	1.06	0.94	1.19
Online communication intensity	0.19	0.06	9.31	1.22**	1.07	1.38
Speak with existing friends	0.08	0.09	0.79	1.08	0.90	1.30
Dare to say more	0.17	0.07	5.06	1.19*	1.02	1.38
Belong to a group	−0.05	0.10	0.25	0.95	0.78	1.15
Make new friends	0.18	0.08	5.13	1.20*	1.02	1.41
Rules on time online	−0.15	0.07	4.55	0.85*	0.74	0.98
Rules on sites visited	0.03	0.07	0.23	1.03	0.89	1.20
Rules on information sharing	−0.21	0.09	5.54	0.80**	0.67	0.96
Constant	−2.76	0.60	21.05	0.06***		
−2 LL	1081.55					
Nagelkerke R^2	0.146					

Model χ^2=110.72; *df*=20; p<.001, n=1068

B coefficient, *S.E.* standard error, *OR* odds ratio, *C.I.* confidence interval, *LL* log likelihood

*p<.05; **p<.01; ***p<.001

being cyberbullied. This finding is not in line with previous studies, which found a positive relationship among online communication, social involvement, cohesive friendships and well-being (Lee 2009; Valkenburg and Peter 2007b; Zhao 2006). However, our results agree with previous research (Kraut et al. 2002; Livingstone and Brake 2009; Van Den Eijnden et al. 2008) indicating that Internet communication can have a negative impact on social relationships, and suggest that the Internet is not always safe for communication purposes.

These results may relate with other studies describing cyberbullying victims as being socially anxious and shy individuals with poor relationships (Navarro et al. 2012). Youths go online for the purpose of initiating new relationships, for experiencing more self-disclosure and for compensating their lack of social skills and real-life social integration (Lee 2009). Consequently, socially isolated and anxious children can communicate with strangers and be more exposed to online risks like cyberbullying victimization. Indeed, research has demonstrated that the youngsters who interact online with strangers are at higher risk of online victimization (Ybarra et al. 2005). This may also explain the findings obtained in relation to online

Table 8 Logistic regression model predicting the associations among Internet use, online communication and co-using parental mediation

	B	S.E.	Wald	OR	95 %C.I.	
					Lower	Upper
Gender	0.42	0.16	6.91	1.52**	1.11	2.09
Grade	0.27	0.15	2.92	1.31	0.96	1.71
Computer in common space	0.10	0.15	0.44	1.10	0.82	1.48
Out-of-home Internet access	−0.21	0.19	1.21	0.80	0.54	1.18
Social networking sites	−0.10	0.07	1.81	0.90	0.78	1.04
E-mail	0.10	0.06	2.41	1.10	0.97	1.26
Instant Messages	0.12	0.06	3.90	1.12*	1.01	1.27
Sharing videos web pages	−0.09	0.06	2.46	0.90	0.80	1.02
Chat	0.21	0.08	6.28	1.23**	1.04	1.45
Information search	0.02	0.06	0.09	1.02	0.89	1.16
Downloading files	0.06	0.06	1.16	1.06	0.94	1.19
Online games	0.04	0.05	0.70	1.05	0.93	1.17
Online communication intensity	0.19	0.06	9.27	1.21**	1.07	1.38
Speak with existing friends	0.08	0.09	0.82	1.08	0.90	1.30
Dare to say more	0.17	0.07	5.00	1.18*	1.02	1.38
Belong to a group	−0.04	0.10	0.19	0.95	0.78	1.16
Make new friends	0.17	0.08	4.41	1.18*	1.01	1.39
Parents advise and help	0.03	0.08	0.14	1.03	0.88	1.20
Web site recommendation	0.04	0.07	0.32	1.04	0.89	1.21
Participation in online activities	0.10	0.09	1.22	1.11	0.92	1.33
Constant	−3.58	0.53	44.31	0.28***		
−2 LL	1084.68					
Nagelkerke R^2	0.143					

Model χ^2=107.59; *df*=20; $p<.001$, n=1068

B coefficient, *S.E.* standard error, *OR* odds ratio, *C.I.* confidence interval, *LL* log likelihood

*$p<.05$; **$p<.01$; ***$p<.001$

communication purposes as we observed that the children who talk online because they dare to say more or because they want to make new friends are at a higher risk of being victimized.

Nevertheless, cyberbullying has also been described as an expanded form of bullying in schools, and children can be cyberbullied by both unknown individuals and friends or acquaintances (Patchin and Hinduja 2006). This may explain the findings showing that cyberbullying victimization relates with the use of instant messaging and Internet-based chat rooms. Several studies have argued that social Internet use differs according to the online activities in which children are involved. Whereas chat users tend to communicate with people exclusively known online, instant messenger users communicate mostly with people they also contact offline (Bryant et al. 2006; Valkenburg and Peter 2007b; Zhao 2006). Children who communicate more through instant messenger may be more targeted by familiar peers, whereas those who participate in chat rooms may be more exposed to strangers' victimization. Future research should examine whether there are any differences in

cyberbullying behaviors (e.g., threatening, insulting, teasing, rumors, displaying private pictures, etc.) in accordance with the type of online communication tool and the perpetrators' identity.

Despite these significant results, no relationship has been found between cyberbullying victimization and location of the computer. This is in line with those reported by Mesch (2009), indicating that even when the computer is located in a shared space, children can hide their online activities from parents or other relatives. Furthermore, cyberbullying does not necessarily occur at home, but can take place at schools, in libraries or other places where youths connect online and where it is difficult to protect them. The out-of-home Internet access variable had no effect on online victimization, indicating that space or location where children access the Internet does not protect them from suffering victimization. Additionally, lack of significant differences for both variables may relate to there being no differences found for the computer location and out-of-home Internet access values between victims and non-victims.

The findings obtained for the relationship between parental mediation and cyberbullying victimization suggest that, although children inform their parents, they display low-to-average levels of mediation techniques; yet some parental mediation strategies lowered moderately, but significantly, the likelihood of online victimization. As regards the influence of restrictive mediation on cyberbullying victimization, checking and supervising the software installed shows a moderate protective effect on victimization. This is in line with previous findings showing a positive effect of some monitoring practices on preventing cyberbullying victimization (Mesch 2009). For example, parental supervision of the software installed in computers allows parents to know the type of interactive technologies their children employ so they can help them become more familiar with that software in order to make recommendations about its appropriate use. Parental monitoring may also prove worthy to identify and intervene early if they notice that their children may be targets of cyberbullying, thus advising how to deal with this situation.

Conversely, no effects were seen for checking the web pages that children visit on the Internet or for installing software that filters or blocks web sites. This lack of significant effects on online victimization may relate to the fact that children access the Internet in places where Internet use regulation is less restrictive or where it is not monitored. Children even access the Internet through cell phones, which evidently makes monitoring even more difficult. Furthermore, as children get older, they learn to get round filtering software and hide their online activities by deleting their navigation history before parents check the web sites visited (Kowalski et al. 2008). Besides, parents' knowledge of different social sites and interactive online platforms, and their awareness of online risks, may also be related with lack of effectiveness in monitoring practices. For example, parents may be more aware of the risks involved in talking with strangers, but believe that instant messenger is safer because children talk mostly with real-life friends. The role of parent knowledge about the Internet and their awareness of online risks suggest a line of inquiry for future research into the effect of parental mediation on cyberbullying.

Joint creation of rules about the time spent online and the personal information shared on the Internet is a relevant evaluative mediation strategy as it lowers the risk of cyberbullying victimization. This is an interesting result for parental mediation because we did not ask children about the rules their parents set to regulate their behavior on the Internet, rather we asked about the rules that parents and children discuss and agree together to avoid online risks. Consequently, this result is in agreement with previous studies, which indicated the significant role of parents engaged in conversation about online risks from different social networks sites (Mesch 2009), and it also reinforces the importance of communication between parents and children about Internet usage (Van Den Eijnden et al. 2010).

However, creation of rules on the sites visited did not relate with less likelihood of victimization. This may be explained again by parent's knowledge of the nature, content and risks of the web sites visited. The web sites that parents do not know well or are not aware of their possible risks may be left out of the negotiations they have with children. Moreover, although parents and children agree not to visit certain web sites, peer pressure or the desire to get along with somebody may lead children to visit them or be exposed to cyberbullying. Future studies should address the potential effect of peer influence mediating the relationship between parenting behavior and cyberbullying victimization.

Unexpectedly, co-using mediation strategies did not lower the risk of cyberbullying victimization. These findings differ from those of previous studies reporting the positive outcomes of recommending web sites and co-using strategies on children's Internet use regulation (Lee and Chae 2007). One possible explanation for this discrepant result could be that the co-using parental strategies in this study indicate practices addressing proper Internet use which take advantage of the good features that the Internet offers. However, these strategies are not really directed to prevent online risks like cyberbullying. Overall, this result does not indicate that parent–child conversations about Internet usage are not valuable; doubtlessly, they are necessary. The result shows that communication between parents and children should address online risks, and should show children that they can trust their parents and have to report any harassment behavior affecting them. Future research should develop a specific measure of co-using strategies directed to prevent cyberbullying and to examine the role of family closeness on the efficacy of this type of mediation.

Limitations should be addressed when interpreting the findings of this study. First, the primary schools selected for this study were in a rural middle class area. The results may differ if participants were from urban deprived or richer areas. Second, the data were collected through self-report measures with participants providing their own ratings for parental mediation strategies. Consequently, the study would be strengthened by including external measures from parents' viewpoints. Third, given the sample's homogenous age (10–12 years), age differences were not explored. Future research needs to examine age differences by considering larger more representative samples ranging from mid-childhood to adolescence. Finally, given the gender differences found in victimization, we recommend that future research should examine the factorial invariance of the scales across gender using the multigroup factor analysis technique (Brown 2006).

Conclusively, the findings herein contribute to a better understanding of the cyberbullying victimization phenomenon in children aged under 12. The results indicate that the time spent online and Internet communication are risk factors for being cyberbullied, while some parental mediation techniques have a protective effect against cyberbullying. The reported findings are also important because they indicate that online communication driven by social compensation and the desire to make new friends increases risks of online victimization and opens up new directions to analyze victimization predictors. Another important contribution of this study is the result indicating the influence of parental mediation which, despite requiring further analysis, suggests that parents' intervention in cyberbullying is a promising tool for prevention.

Implications for prevention and intervention

Just as other authors have explained about traditional school bullying (Houbre et al. 2006), educational psychologists should organize workshops and courses to educate other school professionals, families and students in mediation on technologies by making them aware that Internet risks are spreading, and by teaching them how they can prevent them and how to

react when faced with cyberbullying. Specifically, educational psychologists can help by providing information and guidance for parents and educators about online communication technologies as a first step to know the risks that children may be faced with. Likewise, educators and parents should learn about the nature and forms that cyberbullying take, as well as the resources, materials and organizations where they can find help to deal with cyberbullying. Educators, and particularly parents, should also learn how to improve communication in terms of Internet use rights and responsibilities but, more importantly for victimized children, how to promote children's disclosure about their online behaviors since many children do not talk with parents or educators because they fear losing their Internet privileges (Aricak et al. 2008). These interventions should also promote school-wide cyberbullying prevention programs which place special emphasis on students training in Internet rights and responsibilities, and risky online behaviors (i.e., personal information sharing, contacting strangers) and the actions they themselves can take to deal with these threats (i.e., reporting online aggression to adults; seeking peer support).

References

Akbulut, Y., Sahin, Y. L., & Eristi, B. (2010). Cyberbullying victimization among Turkish online social utility members. *Educational Technology & Society, 13*(4), 192–201.

Aricak, T., Siyahhan, S., Uzunhasanoglu, A., Saribeyoglu, S., Ciplak, S., Yilmaz, N., & Memmedov, C. (2008). Cyberbullying among Turkish adolescents. *Cyberpsychology & Behavior, 11*, 253–261.

Bauman, S. (2010). Cyberbullying in a rural intermediate school: An exploratory study. *The Journal of Early Adolescence, 30*(6), 803–833.

Bonetti, L., Campbell, M. A., & Gilmore, L. (2010). The relationship of loneliness and social anxiety with children's and adolescents' online communication. *Cyberpsychology, Behavior and Social Networking, 13*(3), 279–285.

Bryant, J. A., Sanders-Jackson, A., & Smallwood, A. M. K. (2006). IMing, text messaging, and adolescent social networks. *Journal of Computer-Mediated Communicationn, 11*(2), 577–592.

Brown, T. (2006). CFA with equality constraints, multiple groups, and mean structures. In T. Brown (Ed.), *Confirmatory factor analysis for applied research* (pp. 236–319). New York: Guildford.

Buelga, S., Cava, M. J., & Musitu, G. (2010). Cyberbullying: Victimización entre adolescentes a través del teléfono móvil y de Internet. *Psicothema, 22*(4), 784–789.

Chou, C., Condron, L., & Belland, J. (2005). A review of the research on Internet Addiction. *Educational Psychology Review, 17*(4), 363–388.

Daniel, W. W. (1999). *Biostatistics: A foundation for analysis in the health sciences* (7th ed.). New York: Wiley.

Dehue, F., Bolman, C., & Völlink, T. (2008). Cyberbullying: Youngsters' experiences and parental perception. *Cyberpsychology & Behavior, 11*(2), 217–223.

Dempsey, A. G., Sulkowski, M. L., & Nichols, R. (2009). Differences between peer victimization in cyber and physical settings and associated psychosocial adjustment in early adolescence. *Psychology in the Schools, 46*(10), 962–972.

Estévez, A., Villardón, L., Calvete, E., Padilla, P., & Orue, I. (2010). Adolescentes víctimas de cyberbullying: Prevalencia y características. *Behavioral Psychology, 18*(1), 73–89.

Gross, E. F. (2004). Adolescent Internet use: What we expect, what teens report. *Journal of Applied Developmental Psychology, 25*, 633–649.

Gross, E. F., Juvonen, J., & Gable, S. L. (2002). Internet use and well-being in adolescents. *The Society for the Psychological Study of Social Issues, 58*(1), 75–90.

Houbre, B., Traquinio, C., & Thuillier, I. (2006). Bullying among students and its consequences on health. *European Journal of Psychology of Education, 21*(2), 183–208.

INE (2010). *Encuesta sobre Equipamiento y Uso de Tecnologías de la Información y Comunicación en los hogares 2010*. Retrieved from: http://www.ine.es/jaxi/menu.do?type=pcaxis&path=/t25/p450/a2010&file=pcaxis

INTECO. (2009). *Study on safe habits in the use of ICT by children and adolescents and e-trust of their parents*. Madrid: INTECO.

JCCM (2010). *Estadística educativa sobre el alumnado matriculado en el curso académico 2009/2010*. Retrieved from http://www.educa.jccm.es/educa-jccm/cm/educa_jccm/tkContent?idContent=70349&locale=es_ES&textOnly=false

Juvonen, J., & Gross, E. (2008). Extending the school grounds? bullying experiences in cyberspace. *The Journal of School Health, 78*(9), 496–505.

Katzer, C., Fetchenhauer, D., & Belschak, F. (2009). Cyberbullying: Who are the victims? a comparison of victimization in Internet chatrooms and victimization in school. *Journal of Media Psychology, 21*(1), 25–36.

Kowalski, R. M., Limber, S. P., & Agatston, P. W. (2008). *Cyber bullying: Bullying in the digital age*. Malden: Blackwell.

Kraut, R., Kiesler, S., Boneva, B., Cummings, J., Helgeson, V., & Crawford, A. (2002). Internet paradox revisited. *Journal of Social Issues, 58*(1), 49–74.

Lee, S. J. (2009). Online communication and adolescent social ties: Who benefits more from Internet use? *Journal of Computer-Mediated Communication, 14*, 509–531.

Lee, S. J., & Chae, Y. G. (2007). Children's Internet use in a family context: Influence on family relationships and parental mediation. *Cyberpsychology & Behavior, 10*, 640–644.

Li, Q. (2006). Cyberbullying in schools: A research of gender differences. *School Psychology International, 27*, 157–170.

Livingstone, S., & Brake, D. R. (2009). On the rapid rise of social networking sites: New findings and policy implications. *Children & Society, 24*, 75–83.

Livingstone, S., & Helsper, E. J. (2008). Parental mediation of children's Internet use. *Journal of Broadcasting & Electronic Media, 52*(4), 581–599.

McNeil, D. (1996). *Epidemiological research methods*. New York: Wiley.

Mesch, G. S. (2009). Parental mediation, online activities, and cyberbullying. *Cyberpsychology & Behavior, 12*, 387–393.

Navarro, R., Yubero, S., Larrañaga, E., & Martínez, V. (2012). Children's cyberbullying victimization: associations with social anxiety and social competence in a Spanish sample. *Child Indicators Research, 5*, 281–295.

Patchin, J. W., & Hinduja, S. (2006). Bullies move beyond the schoolyard: A preliminary look at cyberbullying. *Youth Violence and Juvenile Justice, 4*, 148–169.

Peter, J., Valkenburg, P. M., & Schouten, A. P. (2006). Characteristics and motives of adolescents talking with strangers on the Internet. *Cyberpsychology & Behavior, 9*, 526–530.

Scheithauer, H., Hayer, T., Petermann, F., & Jugert, G. (2006). Physical, verbal, and relational forms of bullying among German students: Age trends, gender differences, and correlates. *Aggressive Behavior, 32*, 1–15.

Slonje, R., & Smith, P. K. (2008). Cyberbullying: Another main type of bullying? *Scandinavian Journal of Psychology, 49*, 147–154.

Smith, P. K., Mahdavi, J., Carvalho, M., Fisher, S., Russell, S., & Tippett, N. (2008). Cyberbullying: Its nature and impact in secondary school pupils. *Journal of Child Psychology and Psychiatry, 49*(4), 376–385.

Subrahmanyam, K., & Šmahel, D. (2011). The darker sides of the Internet: Violence, cyber bullying and victimization. In K. Subrahmanyam & D. Šmahel (Eds.), *Digital youth: The role of media in development* (pp. 179–199). New York: Springer.

Topçu, Ç., Erdur-Baker, Ö., & Çapa-Aydin, Y. (2008). Examination of cyberbullying experiences among Turkish students from different school types. *Cyberpsychology & Behavior, 11*(6), 643–664.

Tokunaga, R. S. (2010). Following you home from school: A critical review and synthesis of research on cyberbullying victimization. *Computers in Human Behavior, 26*, 277–287.

Twyman, K., Saylor, C., Taylor, L. A., & Comeaux, C. (2010). Comparing children and adolescents engaged in cyberbullying to matched peers. *Cyberpsychology, Behavior and Social Networking, 13*(2), 195–199.

Valkenburg, P. M., & Peter, J. (2007a). Preadolescents' and adolescents' online communication and their closeness to friends. *Developmental Psychology, 43*, 267–277.

Valkenburg, P. M., & Peter, J. (2007b). Online communication and adolescent well-being: Testing the stimulation versus the displacement hypothesis. *Journal of Computer-Mediated Communication, 12*(4), 1169–1182.

Van Den Eijnden, R., Meerkerk, G., Vermulst, A., Spijkerman, R., & Engels, R. C. M. E. (2008). Online communication, compulsive Internet use, and psychosocial well-being among adolescents: A longitudinal study. *Developmental Psychology, 44*(3), 655–665.

Van Den Eijnden, R., Spijkerman, R., Vermulst, A. A., Van Rooij, T. J., & Engels, R. C. M. E. (2010). Compulsive Internet use among adolescents: Bidirectional parent–child relationships. *Journal of Abnormal Child Psychology, 38*, 77–89.

Walrave, M., & Heirman, W. (2011). Cyberbullying: Predicting victimization and perpetration. *Children & Society, 25*, 59–72.

Willard, N. E. (2006). *Cyberbullying and cyberthreats*. Eugene: Center for Safe and Responsible Internet Use.

Ybarra, M. L., Alexander, C., & Mitchell, K. J. (2005). Depressive symptomatology, youth Internet use, and online interactions: A national survey. *Journal of Adolescent Health, 36*(1), 9–18.

Ybarra, M. L., & Mitchell, K. J. (2004). Online aggressors/targets, aggressors, and targets: A comparison of associated youth characteristics. *Journal of Child Psychology and Psychiatry, 45*(7), 1308–1316.

Ybarra, M. L., Mitchell, K. J., Finkelhor, D., & Wolak, J. (2007). Internet prevention messages: Targeting the right online behaviors. *Archives of Pediatrics & Adolescent Medicine, 161*, 138–145.

Zhao, S. (2006). Do Internet users have more social ties? a call for differentiated analyses of Internet use. *Journal of Computer-Mediated Communication, 11*, 844–862.

Raúl Navarro. University of Castilla-La Mancha, Faculty of Education and Humanities, Department of Psychology. Avda. de los Alfares, 42, 16071 Cuenca, Spain. Email: Raul.Navarro@uclm.es

Current themes of research:

Gender differences in aggressive behaviour. Social and educational factors associated with bullying and cyberbullying. School adjustment and aggression.

Most relevant publications in the field of Psychology of Education:

Navarro, R., Larrañaga, E. & Yubero, S. (2011). Bullying-victimization problems and aggressive tendencies in Spanish secondary school students: the role of gender stereotypical traits. *Social Psychology of Education, 14*, 457–473.

Navarro, R., Yubero, S., Larrañaga, E., & Martínez, V. (2012). Children's Cyberbullying Victimization: Associations with Social Anxiety and Social Competence in a Spanish Sample. *Child Indicators Research, 5*, 281–295.

Cristina Serna. University of Castilla-La Mancha, Faculty of Social Work, Department of Psychology. Campus Universitario, s/n, 16071, Cuenca, Spain. Email: cristina.serna@uclm.es

Current themes of research:

School failure. Psychosocial factors associated with school adjustment.

Most relevant publications in the field of Psychology of Education:

Yubero, S., Larrañaga, E., & Serna, C. (2011). School and school failure. The challenges of educational exclusion. In L. Amador y G. Musitu (coords.), *Social exclusion and diversity* (pp. 169–192). México: Trillas. [Spanish language].

Yubero, S., Serna, C., & Larrañaga, E. (2009). School failure as a type of social exclusion. In S. Yubero, E. Larrañaga & J. F. Morales (coord.), *Exclusion: new forms and new contexts* (pp. 157–170). Cuenca: Editions of University of Castilla-La Mancha. [Spanish language].

Verónica Martínez. University of Castilla-La Mancha, Faculty of Education and Humanities, Department of Psychology. Avda. de los Alfares, 42, 16071 Cuenca, Spain. Email: v.martinezsp@gmail.com

Current themes of research:

Cyberbullying and bullying in schools. Gender stereotypes and learning processes.

Most relevant publications in the field of Psychology of Education:

Navarro, R., Yubero, S., Larrañaga, E., & Martínez, V. (2012). Children's Cyberbullying Victimization: Associations with Social Anxiety and Social Competence in a Spanish Sample. *Child Indicators Research, 5*, 281–295.

Roberto Ruiz-Oliva. Málaga University, Faculty of Communication Science, Department of Journalism. Campus de Teatinos, 29071, Málaga, Spain.

Current themes of research:

Social Media, online communication and stereotypes in television.

Most relevant publications in the field of Psychology of Education:

Ruiz-Oliva, R. (2011). The talk show genre. Analysis and proposals for the academic study of an international television format and regional adaptations. In I. Bort, S. García, & M. Martín (eds.) *New trends and hybrids of speeches in audiovisual contempary digital culture* (pp. 319–330). Madrid: Social Science Editions. [Spanish language].