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# Parental Communication and Feelings of Affiliation in Adolescent Aggressors and Victims of Cyberbullying

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**Abstract:** Cyberbullying is an increasingly frequent problem among adolescents, and it produces considerable social concern. Using a cross-sectional and quantitative methodology, the main objective of this study was to analyze the differences among students involved in the perpetration and victimization of cyberbullying (non-involved, occasional, and severe), in their parental communication, and feelings of affiliation with classmates. The sample consisted of 849 adolescents (51.7% boys and 48.3% girls) from 12 to 18 years old ( $M = 14.5$ ;  $SD = 1.62$ ). Three comparison groups of aggressors and victims of cyberbullying were formed, depending on the intensity of the intimidation: non-involved, occasional, and severe. The results of the analysis of variance indicated that adolescents involved in cyberbullying as perpetrators or victims have less open and more avoidant communication with their parents than adolescents who are not involved in cyberbullying. Additionally, victims of cyberbullying perceive lower feelings of affiliation with their classmates, whereas cyberbullies show no differences between the groups on this variable. These new results provide insight into the important role of family and peers in the prevention and eradication of the growing problem of cyberbullying.

**Keywords:** cyberbullying; perpetration; victimization; parental communication; affiliation; peers

## 1. Introduction

The growing use of a wide variety of technologies has created new forms of possible interaction and communication among adolescents (Betts and Spenser 2017; Goodyear and Armour 2018). Information and communication technologies (ICTs) provide many advantages for young people. However, the use of electronic devices at increasingly young ages also encourages their inappropriate use (Campbell and Bauman 2018; Garaigordobil 2017). Cyberbullying is defined as an intentional and aggressive behavior that is repeated frequently over a period of time through the use (by an individual or group) of electronic devices against a victim who cannot easily defend him/herself (Smith et al. 2008, p. 376). Today, this is the most common form of digital bullying among peers in adolescence (Watkins et al. 2016).

Cyberbullying is a serious and growing problem that affects more children and adolescents every day in all developed countries. In fact, most researchers coincide in pointing out that the prevalence of

cyberbullying has increased considerably in recent years (Kowalski et al. 2014; Machimbarrena and Garaigordobil 2018; Watts et al. 2017). In the case of cybervictims, these authors have mentioned a 6.5% prevalence of cyberbullying victims in their study (Ybarra and Mitchell 2004). Almost ten years later, Floros et al. (2013) observed a cybervictim prevalence of 28.3%. Regarding cyberbullies, an increase in their prevalence has also been reported over the years. In 2008, Slonje and Smith (2008) found a 10.3% prevalence of cyberbullies in their study. Almost a decade later, Lee and Shin (2017) noted a 34% prevalence of cyberbullies. Different studies reveal that there is a greater percentage of occasional cyberbullies and cybervictims than severe ones (Buelga et al. 2015; Palermi et al. 2017). In spite of the studies mentioned above, one problem occurring in the scientific literature on the prevalence of cyberbullying is the lack of consensus with respect to its definition and the methodologies used for measuring cyberbullying and cybervictimization (Baldry et al. 2018; Hinduja and Patchin 2014). This divergence greatly complicates the comparison of research, both within countries as well as between different countries and cultures.

In addition, cyberbullying has negative consequences for the psychosocial wellbeing of adolescents involved in this problem. Cybervictims sometimes present depression, anxiety, suicide ideation, fear, nervousness, irritability, somatizations, sleep disorders, and difficulties in concentrating (Garaigordobil 2011; Navarro et al. 2015). Although the most pronounced effects are found in victims, cyberbullying also has negative consequences for cyberbullies. Some studies indicate that cyberbullies' behavior can be a precursor to criminal behavior (Buelga et al. 2015; Juvonen and Graham 2014). Moreover, CCerezo (2006) also observed a lack of empathy and moral comprehension in the bullies that keeps them from establishing normal social relationships and affects their psychological and social development.

In this context, given the seriousness of cyberbullying, different studies emphasize the important role of families in educating and preventing it (Taiariol 2010; Tsiplakides 2018). With regard to family climate, on the one hand, different studies point out that family cohesion acts as a protective factor against both cyberaggression and cybervictimization (Elsaesser et al. 2017; Sasson and Mesch 2017). On the other hand, family conflict is conceived as a risk factor that increases the probability that an adolescent will become involved in cyberbullying (Kowalski et al. 2014; Ortega-Baron et al. 2016). In this regard, Ybarra and Mitchell (2004) found that a poor family relationship, characterized by low supervision, lack of emotional ties, and severe discipline, is associated with a greater probability of becoming a victim or aggressor through technologies.

Another family variable related to the appearance and continuity of violent behaviors in adolescence is the adolescent's communication with his/her parents. In fact, the quality of the family atmosphere depends largely on the communication among the members of the family (Galvin et al. 2015). Regarding the issue of bullying, different studies show that bullies and victims have less open and more avoidant and offensive communication than adolescents who are not involved in this problem (Carrascosa et al. 2016; Ledwell and King 2015). With regard to cyberbullying, the study by Dehue et al. (2008) showed that more difficulties in family communication were observed in both cyberbullies and cybervictims. In addition, Larrañaga et al. (2016) found that cybervictims have more avoidant communication, which contributes to prolonging the duration of the cybervictimization.

The negative or not very fluid communication between parents and adolescents makes it difficult for parents to detect their children's cyberbullying. Various studies indicate that up to 50% of victims do not tell anyone about the bullying they are experiencing, or they do so rarely because they are afraid of being cyberbullied again (Ang and Goh 2010; García-Maldonado et al. 2011). Furthermore, according to the study by Li (2007), one-third of adolescents believe that even if adults know that there is a cyberbullying problem, they will not be able to help them. Other studies have shown that, in general, the first people victims go to for help are their peers (Arıcak et al. 2008; Brooks et al. 2012).

The quality and support of peer relationships is another important variable in adolescents' wellbeing (Trejos-Herrera et al. 2018). Odacı and Kalkan (2010) demonstrated that victims of cyberbullying experience greater isolation and social rejection from their peers. Moreover,

different studies revealed that cyberbullies are popular and respected for their use of cyberviolence (Buelga et al. 2015; Povedano et al. 2012). This lack of help and the reinforcement of the aggressor by peers are variables that, together with family variables, also influence the occurrence and continuity of cyberbullying over time (Wegge et al. 2016; Calvete et al. 2010).

In short, different studies have proven the important role of family and peers to prevent intimidation among peers (Sasson and Mesch 2017; Price and Dalgleish 2010). According to Cava (2011), victims with positive family communication and who feel that they can identify with their peer group have a better psychological adjustment. According to this study, it is essential that the victim has a climate of trust and support in their environment to be able to communicate the situation experienced and overcome the problem of harassment.

Taking these antecedents into account, and in addition to the importance of parents and peers in preventing and reducing cyberbullying, the objectives of this study are: (1) To determine the extent of the relationship between cyberbullying (perpetration and victimization) and the variables in this study: Open communication (mother, father), avoidant communication (mother, father), and feeling of affiliation (peers); (2) analyze the prevalence of cybervictims and cyberbullies based on the intensity (occasional and severe); (3) analyze whether there are significant differences among the three groups of aggressors (non-cyberbullies, occasional cyberbullies, and severe cyberbullies) on the variables: Open communication (mother, father), avoidant communication (mother, father), and feeling of affiliation (peers); and (4) analyze whether there are significant differences among the three groups of victims (non-cybervictims, occasional cybervictims, and severe cybervictims) on the target variables. In short, this study contributes to broadening the knowledge about the differences between victims and aggressors of cyberbullying in the family communication and perception of feeling of affiliation with peers.

## 2. Method

### 2.1. Participants

In this cross-sectional study, participant selection was carried out by means of a non-probabilistic sampling for convenience due to their accessibility and prior interest in participating in the present study. The strata were established according to the grade level in high school (1st, 2nd, 3rd, and 4th course) of Compulsory Secondary Education (ESO) and the sociodemographic equivalence between the schools. The sample size of adolescents corresponding to the student group size in compulsory secondary education (ESO) in the Valencian Community, with a sampling error of  $\pm 3.5\%$ , a confidence level of 95%, and  $p = q = 0.5$ , ( $n = 190.872$ ), was estimated at 781 students.

The sample was composed of 849 high school students between 12 and 18 years old ( $M = 14.09$ ;  $SD = 1.37$ ) who attended four public high schools in the Valencian Community (Spain). Sex distribution of participants in this study was similar: 51.7% ( $n = 439$ ) were boys, and 48.3% were girls ( $n = 410$ ). Regarding distribution by grade level, 22.4% ( $n = 190$ ) of participants were in the first course of ESO, (grade 7), 30.7% ( $n = 261$ ) were in the second course (grade 8), 22.6% ( $n = 192$ ) were in the third course (grade 9), and 24.3% ( $n = 206$ ) were in the fourth course (grade 10).

### 2.2. Measures

Adolescent victimization through the mobile phone and Internet scale (CYBVIC; Buelga et al. 2010, 2012). This scale consists of 18 items, which are rated on a Likert-type scale from 1 to 4 (never, seldom, often, and always). The items evaluate the bullying experienced through the mobile phone and the Internet in the past year. Mobile phone victimization is composed of 8 items (for example, "I have been insulted or ridiculed through messages or calls"), and Internet victimization is evaluated with the same items and 2 other items related to identity theft (for example, "They stole my identity to say or do bad things on the Internet"). In this study, Cronbach's alpha reliability coefficient for the scale was 0.88 and the coefficient omega was 0.86.

Adolescent aggression through the mobile phone and Internet scale (CYB-AG; [Buelga and Pons 2012](#)). This scale consists of 10 items with a response range from 1 to 5 (never, rarely, sometimes, frequently, quite often). The items evaluate the frequency with which the person has participated in aggressive behaviors through new technologies in the past year (for example, “I have used a peer’s identity to do bad things on the Internet or on the phone” or “I have told lies or rumors to annoy a classmate over the Internet or on the phone”). In this study, Cronbach’s alpha reliability coefficient for the scale was 0.82 and the coefficient omega was 0.80.

Parent–adolescent communication scale (PACS; [Barnes and Olson 1982](#)). This scale is divided into two subscales (the adolescent’s communication with the mother and the adolescent’s communication with the father), each containing 16 items, which are rated from 1 (never) to 5 (always). For the purposes of this study, the dimensions of open communication and avoidance communication were used. Open communication evaluates the degree of positive communication based on understanding and the free exchange of information (for example, “In my family we express our opinions frequently and spontaneously”). Avoidant communication evaluates the degree of lack of communication, based on distancing and avoidance (for example, “In my family, we almost never openly show our anger”). In this study, Cronbach’s alpha reliability coefficients for the open communication dimension were 0.72 (mother) and 0.69 (father). Cronbach’s alpha reliability coefficients for the avoidance communication dimensions were 0.73 (mother) and 0.61 (father). The Omega coefficients for open communication dimension were 0.70 (mother) and 0.67 (father) and for the avoidance communication dimensions 0.71 (mother) and 0.60 (father).

Feeling of affiliation with peers subscale ([Fernández-Ballesteros and Sierra 1989](#)). For the purposes of this study, the subscale of the classroom environment scale (CES; Spanish adaptation by [Fernández-Ballesteros and Sierra 1989](#)) was used. This scale consists of 10 true–false items that evaluate the adolescent’s perception of affiliation: Friendship and help among students (for example, “Students like to help each other”). In this study, Cronbach’s alpha reliability coefficient for the subscale was 0.74 and the coefficient omega was 0.72.

### 2.3. Procedure

Various informative meetings were held with the schools selected to explain the study aims. The selection of the high schools was carried out through non-probabilistic convenience sampling, based on their accessibility and prior interest in participating in this study. After obtaining the schools’ permission and informed consent from the parents, the instruments were applied during school hours by previously trained researchers. Throughout the study, adolescents were informed that their participation was voluntary and anonymous. The participants’ privacy was guaranteed, and none of the students refused to answer. The present study follows the ethical values required for research on humans, in accordance with the 1964 Declaration of Helsinki and its later amendments. Further, this study was approved by the Ethics Committee of the University of Valencia, Spain (Project identification code: H1456762885511).

### 2.4. Data Analysis

All data were analyzed with the SPSS statistical package (version 23). First, a Pearson correlation analysis was carried out to determine the relations between cyberbullying (perpetration and victimization) and the variables being studied open communication (mother, father), avoidance communication (mother, father), and feeling of affiliation (peers).

Second, subjects’ scores on the scales of aggression and victimization through the mobile phone and Internet were used to classify students into three groups: (a) adolescent non-cyberbullies and adolescent non-cybervictims; (b) occasional cyberbullies and occasional cybervictims; (c) severe cyberbullies and severe cybervictims. The cut-off point used to assign the subjects to the group of severe cyberbullies and cybervictims was 1 standard deviation (+1 SD) above the mean. These data were  $M = 1.23$ ,  $SD = 0.34$  for the scale of cyberbullying (minimum score 10, maximum 50), and  $M = 2.46$ ,

$SD = 0.60$  for the scale of cybervictimization (minimum score 18, maximum 72). The adolescents who scored 1 (“never”) on all items on these scales were placed in the non-cyberbully and non-cybervictim groups. The remaining adolescents were assigned to the groups of occasional cyberbullies and occasional cybervictims.

Third, the prevalence of cyberbullies and cybervictims based on the intensity (non-involved, occasional, and severe) was calculated.

Finally, a one-factor ANOVA was performed to analyze differences among the three comparison groups (non-cyberbullies, occasional cyberbullies, and severe cyberbullies and non-cybervictims, occasional cybervictims, and severe cybervictims) on the variables: open communication (mother, father), avoidance communication (mother, father), and feeling of affiliation (peers). Post-hoc Games–Howell tests were applied when there were significant differences between the comparison groups on the variables studied.

### 3. Results

The Pearson correlation analysis reveals statistically significant correlations between cyberbullying (perpetration and victimization) and almost all the variables analyzed in this study (Table 1). The only variable that did not present statistically significant correlations with cyberbullying (perpetration) is the feeling of affiliation with peers ( $p = -0.013$ ).

**Table 1.** Pearson correlations between cyberbullying (perpetration and victimization) and the study variables.

Variables	Cyberbullying Perpetration	Cyberbullying Victimization
Cyberbullying perpetration	-	0.443 **
Cyberbullying victimization	0.443 **	-
Open communication (mother)	-0.174 **	-0.178 **
Open communication (father)	-0.125 **	-0.123 **
Avoidant communication (mother)	0.097 **	0.161 **
Avoidant communication (father)	0.077 *	0.147 **
Feeling of affiliation (peers)	-0.013	-0.051 *

Note: \*  $p < 0.05$ , \*\*  $p < 0.01$ .

Cyberbullying perpetration correlated positively at  $p < 0.01$  with cyberbullying victimization and avoidant communication with the mother. A positive significant correlation between cyberbullying at  $p < 0.05$  and avoidant communication with the father was also observed. Further, cyberbullying perpetration correlated negatively at  $p < 0.01$  with open communication with both the mother and father.

In relation to cyberbullying victimization, findings showed that this variable correlated positively at  $p < 0.01$  with cyberbullying perpetration, avoidant communication with the mother, and avoidant communication with the father. In addition, cyberbullying victimization correlated negatively at  $p < 0.01$  with open communication with both the mother and father.

Regarding the prevalence of cybervictimization, results indicated that 73.5% ( $n = 624$ ) of adolescents participating in this study have never been victimized through the Internet or the mobile phone, whereas 26.5% ( $n = 225$ ) have been victims of cyberbullying in the past year. In this scale (range score 18–72), from these victims, 22.4% ( $n = 190$ ) were cyberbullied occasionally with a mean score of 24.01 ( $SD = 4.68$ ), and 4.1% ( $n = 35$ ) severely with a mean score of 31.97 ( $SD = 7.20$ ).

For the prevalence of cyberbullying (range score 10–50), findings indicated that 53.7% ( $n = 456$ ) of adolescents in this study have never bullied their peers through the Internet or mobile phone, whereas 46.3% ( $n = 393$ ) have been cyberbullies in the past year. Of these aggressors, 35.5% ( $n = 301$ ) cyberbullied their peers occasionally, with a mean score of 13.01 ( $SD = 1.01$ ), and 10.8% ( $n = 92$ ) severely, with a mean score on the cyberbullying scale of 20.08 ( $SD = 4.08$ ).

With regard to the analysis of variance between cyberbully groups, results showed (Table 2) that on the variables of open communication with the mother and with the father, the non-cyberbully

adolescents presented significantly higher scores than the cyberbullies, with no significant differences between the occasional cyberbullies and the severe ones (open communication with the mother:  $F = 11.87$ ,  $p < 0.001$ ; open communication with the father:  $F = 10.87$ ,  $p < 0.001$ ). Furthermore, results indicated (Table 2) that on the variables of avoidant communication with the mother and with the father, the non-cyberbully group presented significantly lower scores than cyberbullies, with no significant differences found between occasional and severe cyberbullies (avoidant communication with the mother:  $F = 5.69$ ,  $p = 0.003$ ; avoidant communication with the father:  $F = 5.47$ ,  $p = 0.004$ ). In relation to the feeling of affiliation with peers, no significant differences were observed between the comparison groups ( $F = 0.53$ ,  $p = 0.589$ ).

**Table 2.** Mean (Standard Deviation), ANOVA of differences between cyberbully groups in variables family communication and feeling of affiliation.

Variables	Non-Cyberbullies	Occasional Cyberbullies	Severe Cyberbullies	F	$\eta^2$
Open communication (mother)	3.86 <sup>a</sup> (0.94)	3.64 <sup>b</sup> (0.91)	3.39 <sup>b</sup> (0.98)	11.87 ***	0.027
Open communication (father)	3.58 <sup>a</sup> (0.93)	3.36 <sup>b</sup> (0.86)	3.16 <sup>b</sup> (0.87)	10.87 ***	0.013
Avoidant communication (mother)	2.83 <sup>b</sup> (0.75)	2.98 <sup>a</sup> (0.69)	3.03 <sup>a</sup> (0.76)	5.69 **	0.025
Avoidant communication (father)	2.90 <sup>b</sup> (0.75)	3.06 <sup>a</sup> (0.68)	3.07 <sup>a</sup> (0.67)	5.47 **	0.013
Feeling of affiliation (peers)	1.45 (0.24)	1.46 (0.25)	1.47 (0.21)	0.53	0.001

Note:  $F =$  Welch;  $\alpha = 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ ; Games–Howell Test,  $a > b$ ; small effect size:  $\eta^2 \leq 0.06$ .

Regarding differences between cybervictim groups, findings indicated (Table 3) that on the open communication with the mother variable, non-cybervictim adolescents presented significantly higher scores than cybervictims, with no significant differences between cybervictim groups depending on the intensity (open communication with the mother:  $F = 22.45$ ,  $p < 0.001$ ). However, on the open communication with the father variable, the group of severe cybervictims presented significantly lower scores than the occasional cybervictims, who, in turn, presented lower scores than the non-cybervictims (open communication with the father:  $F = 13.25$ ,  $p < 0.001$ ).

**Table 3.** Mean (Standard Deviation), ANOVA of differences between cybervictim groups in variables family communication and feeling of affiliation.

Variables	Non-Cybervictims	Occasional Cybervictims	Severe Cybervictims	F	$\eta^2$
Open communication (mother)	3.85 <sup>a</sup> (0.88)	3.42 <sup>b</sup> (1.05)	3.18 <sup>b</sup> (1.02)	22.45 ***	0.050
Open communication (father)	3.54 <sup>a</sup> (0.92)	3.29 <sup>b</sup> (0.78)	2.88 <sup>c</sup> (1.01)	13.25 ***	0.011
Avoidant communication (mother)	2.86 <sup>b</sup> (0.74)	3.02 <sup>a</sup> (0.68)	3.09 <sup>a</sup> (0.69)	4.76 **	0.030
Avoidant communication (father)	2.92 <sup>b</sup> (0.74)	3.11 <sup>a</sup> (0.63)	3.25 <sup>a</sup> (0.81)	7.94 ***	0.018
Feeling of affiliation (peers)	1.46 <sup>a</sup> (0.24)	1.45 <sup>a</sup> (0.23)	1.33 <sup>b</sup> (0.21)	4.75 **	0.011

Note:  $F =$  Welch;  $\alpha = 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ ; Games–Howell Test,  $a > b > c$ ; small effect size:  $\eta^2 \leq 0.06$ .

Further, on the variables avoidant communication with the mother and with the father, as in the cyberbullies, the results indicated (Table 3) that the non-cybervictim group presented significantly lower scores than cybervictims, with no significant differences between occasional and severe cybervictims (avoidant communication with the mother:  $F = 4.76$ ,  $p = 0.009$ ; avoidant communication with the father:  $F = 7.94$ ,  $p < 0.001$ ). Regarding the feeling of affiliation with peers, significant differences were observed ( $F = 4.75$ ,  $p = 0.009$ ). Specifically, severe cybervictims had a lower feeling of affiliation than non-cybervictims and occasional cybervictims.

#### 4. Discussion

The main objective of this study was to analyze possible differences in family communication and the feeling of affiliation amongst adolescents involved in perpetration and victimization of cyberbullying. These two groups, cyberbullies and cybervictims, were classified and analyzed

according to the frequency of intimidation: Severe, occasional and non-involved; the differences between open and avoidant communication with both the mother and father; and in the feeling of affiliation with peer companions. Prior to carrying out this main purpose, the relationship between the study variables was determined, as well as the prevalence of cybervictimization and cyberbullying (severe, occasional, and non-involved).

Thus, regarding relationships between variables, the existence of a positive association between cybervictimization and cyberbullying has been demonstrated in accordance with previous literature. This result seems to indicate that some adolescents involved in cyberbullying behaviors could also be victims of cyberbullying and vice versa, suggesting the idea of the double role of cyberbully–victim. In this regard, several authors suggest that this double role is more common in the virtual world than in traditional bullying (Buelga et al. 2017; Mishna et al. 2012), because adolescents can hide their identity online (Aboujaoude et al. 2015; Betts and Spenser 2017; Baldry et al. 2018). On the other hand, our work has shown that cyberbullying and cybervictimization are positively related to avoidant communication with the mother and father, and negatively with open communication with both parents. The quality of family communication proves to be, therefore, as highlighted in the literature, a protective or risk factor for children’s involvement in cyberbullying and cybervictimization behaviors (Larrañaga et al. 2016; Navarro et al. 2013; Buelga et al. 2017). In addition, we have confirmed that the feeling of affiliation with the peer group does not correlate significantly with cyberbullying, but it does have a relationship with cybervictimization, although weak. With regard to cyberbullying, among peers, social self-concept, popularity or social reputation are more important variables than the feeling of affiliation, as highlighted in research (Buelga et al. 2015; Garaigordobil 2017; Wegge et al. 2016).

Regarding the findings related to the prevalence of cyberbullying and cybervictimization, our data indicated that approximately more than a quarter of adolescents have been victims of cyberbullying (22.4% occasional and 4.1% severe). This incidence of cybervictimization coincides with the results found by Zych et al. (2016) in their systematic review of prevalence of cyberbullying, which showed an average prevalence of 24.4% of cybervictimization. With respect to aggressors, our data demonstrated a much higher prevalence; almost half of adolescents have been cyberbullies (35.5% occasional and 10.8% severe cyberbullies). This high prevalence of cyberbullies was also found in Spain by other authors, such as Calvete et al. (2010), who reported a 44 percent of cyberbullying. One possible reason for this high incidence of cyberbullying in Spain may be due to the fact that 98% of 14-year-old Spanish adolescents have a smartphone (Ditrendia Digital Marketing Trends 2016). This widespread use of smartphones by adolescents is combined with the fact that the virtual world has specific characteristics that seem to contribute to a greater expression of violent behaviors (Kowalski et al. 2014; Ortega-Baron et al. 2017). With regard to cyberbullying severity, previous studies also noted that the prevalence of occasional cyberbullying is much more frequent than severe cyberbullying (Larrañaga et al. 2016; Sorrentino et al. 2018).

Regarding the main purpose of our study, our results indicated the importance of the quality of family communication in children’s adjustment when dealing with both cybervictimization and cyberbullying. Significant differences between cyberbullies (severe and occasional) with respect to adolescents not involved in cyberbullying have been confirmed. Thus, cyberbullies have obtained lower scores in open communication and higher scores in avoidant communication, both with the mother and father. These findings coincided with the vast amount of research that reports that positive, open, and fluid communication is related to a lower involvement in aggressive behavior in the child, both in traditional bullying (Galvin et al. 2015; Ledwell and King 2015) as in cyberbullying (Appel et al. 2014; Buelga et al. 2017). On the contrary, communication that is not very fluid or negative with parents is associated with a greater participation by children in antisocial and violent behavior (Braithwaite et al. 2017; Carrascosa et al. 2016; Estévez and Emler 2010). In this regard, in a study conducted by Buelga et al. (2015), it was observed that cyberbullies presented inadequate patterns of family communication, characterized by offensive communication, full of negative and unclear messages. In this line, Solecki (2016) also noted that cyberbullies show negative communication with

their parents, in addition to receiving little parental supervision of their online behavior. Many parents do not supervise or have a dialogue with their children about their Internet browsing, so they do not know the behavior they have in the online environment and if they are cyberbullies or cybervictims (Elsaesser et al. 2017; Livingstone et al. 2011).

Indeed, our work has also demonstrated that cybervictims, like cyberbullies, perceive less open communication and more avoidant communication with both parents compared to adolescents not involved in cyberbullying. This result is consistent with previous studies that also detect a greater deterioration in family communication in victims of cyberbullying (Appel et al. 2014; Larrañaga et al. 2018). Likewise, studies on traditional bullying have discovered that poor quality in the family climate, and especially parent–child communication, is a risk factor for school victimization (Cava 2011; Cerezo 2006). Inadequate patterns in family communication, as occurs with bullying, are closely linked to the perception of poor parental support (Hinduja and Patchin 2014). This negative family climate consequently increases the persistence in the dynamics of cybervictimization (Cuesta Medina et al. 2018; Royne et al. 2017). Frequently, children try to resort to peers to get out of the situation of harassment, but often they do not find the expected help because peers lack the necessary resources to resolve this situation (Brooks et al. 2012; Varela et al. 2013), or because they do not have a network of friends to turn to (Ortega-Baron et al. 2016; Wegge et al. 2016).

In this regard, in this study, we have verified that cybervictims obtain lower scores in the feeling of affiliation (friendship and help) than adolescents not involved in cyberbullying. These findings coincide with studies that suggest that victims experience loneliness, social isolation, and rejection by their peers (Olenik-Shemesh et al. 2012; Şahin 2012). This situation does not seem to occur with cyberbullies who are perceived by their peers as important figures in their group (Barlińska et al. 2013). Cyberbullies are popular and accepted among their peers (Pellegrini and Bartini 2000). Thus, our results have revealed that, unlike the situation with cybervictims, there is no difference in feelings of affiliation between cyberbullies and adolescents not involved in cyberbullying, which seems to confirm that cyberbullies do indeed belong and feel they can identify with a group of friends (Buelga et al. 2015).

Finally, this study has some limitations. The cross-sectional design does not allow us to see relationship changes between the variables over time. Future longitudinal studies can help to understand how the variables in the cyberbullying problem influence each other over the years. In addition, adolescents answered self-reports, which can present certain social desirability effects. On this matter, Flisher et al. (2004) confirmed that the use of self-reports to investigate violent behaviors in adolescence is acceptable. Regarding the instruments used, the reliability obtained in the avoidant communication scale is limited; it has been demonstrated that by eliminating an item from the scale, the internal consistency of the instrument increases significantly. This weakness will be reviewed in future research. Finally, in this study, only adolescents participated. Future studies should include the point of view of parents and peers.

Despite its limitations, this study contributes to a greater understanding of the role of family communication in cyberbullying perpetration and victimization. The fact that in both roles, these adolescent groups perceive family communication patterns as less open and more avoidant with parents proves the relevance of this variable to prevent children's online risk behaviors (Elsaesser et al. 2017; Sasson and Mesch 2017). Encouraging open and fluid dialogue in the family is certainly one of the strategies that helps children to perceive that their parents are a source of support they can count on when they have problems. Therefore, talking about the benefits and risks of the Internet in a positive environment increases the capacity of parents to support their children emotionally and psychologically when cybervictimization situations occur (Buelga et al. 2017; Navarro et al. 2013). This is, without a doubt, one of the biggest challenges for parents, because victims often avoid talking to their parents about their negative experiences online.

## 5. Conclusions

This study shows the differences among students involved in the perpetration and victimization of cyberbullying (non-involved, occasional, and severe) in their parental communication and feelings of affiliation with classmates.

The results showed that adolescent cyberbullies and cybervictims have less open and more avoidant communication with their parents than adolescents who are not involved in cyberbullying. Regarding the feeling of affiliation with peers, cybervictims felt less affiliation with this group of friends. However, no significant differences were observed in the perception of affiliation with peers in the perpetrators of cyberbullying.

In summary, this study contributes to a greater understanding of the role of parental communication and the perception of peer support in cyberbullying perpetration and victimization.

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## References

- Aboujaoude, Elias, Mathew Savage, Vladan Starcevic, and Wael Salame. 2015. Cyberbullying: Review of an old problem gone viral. *Journal of Adolescent Health* 57: 10–18. [\[CrossRef\]](#) [\[PubMed\]](#)
- Ang, Rebecca P., and Dion Goh. 2010. Cyberbullying among Adolescents: The role of affective and cognitive empathy, and gender. *Child Psychiatry & Human Development* 41: 387–97. [\[CrossRef\]](#)
- Appel, Markus, Barbara Stiglbauer, Bernad Batinic, and Peter Holtz. 2014. Internet use and verbal aggression: The moderating role of parents and peers. *Computers in Human Behavior* 33: 235–41. [\[CrossRef\]](#)
- Aricak, Tolga, Sinem Siyahhan, Aysegul Uzunhasanoglu, Sevda Saribeyoglu, Songul Ciplak, Nesrin Yilmaz, and Cemil Memmedov. 2008. Cyberbullying among Turkish sdolescents. *Cyberpsychology & Behavior* 11: 253–61. [\[CrossRef\]](#)
- Baldry, Anna Costanza, Catherine Blaya, and David P. Farrington, eds. 2018. *International Perspectives on Cyberbullying: Prevalence, Risk Factors and Interventions*. Berlin: Springer, ISBN 978-3-319-73263-3.
- Barlińska, Julia, Anna Szuster, and Mikołaj Winiewski. 2013. Cyberbullying among adolescent bystanders: Role of the communication medium, form of violence, and empathy. *Journal of Community & Applied Social Psychology* 23: 37–51. [\[CrossRef\]](#)
- Barnes, Howard, and David H. Olson. 1982. Parent-Adolescent Communication Scale. In *Family Inventories: Inventories Used in a National Survey of Families across the Family Life Cycle*. Edited by David H. Olson. St. Paul: Family Social Science, University of Minnesota, pp. 33–48.
- Betts, Lucy R., and Karin A. Spenser. 2017. “People think it’s a harmless joke”: Young people’s understanding of the impact of technology, digital vulnerability and cyberbullying in the United Kingdom. *Journal of Children and Media* 11: 20–35. [\[CrossRef\]](#)
- Braithwaite, Dawn O., Elizabeth A. Suter, and Kory Floyd. 2017. *Engaging Theories in Family Communication: Multiple Perspectives*. Abingdon: Routledge.
- Brooks, Fiona M., Josefine Magnusson, Neil Spencer, and Antony Morgan. 2012. Adolescent multiple risk behaviour: An asset approach to the role of family, school and community. *Journal of Public Health* 34: i48–i56. [\[CrossRef\]](#)
- Buelga, Sofía, and Javier Pons. 2012. Agresiones entre adolescentes a través del teléfono móvil y de Internet. *Psychosocial Intervention* 21: 91–101. [\[CrossRef\]](#)

- Buelga, Sofía, María Jesús Cava, and Gonzalo Musitu. 2010. Cyberbullying: Victimization entre adolescentes a través del teléfono móvil y de Internet. *Psicothema* 22: 784–789.
- Buelga, Sofía, María Jesús Cava, and Gonzalo Musitu. 2012. Validación de la escala de victimización entre adolescentes a través del teléfono móvil y de Internet. *Revista Panamericana de Salud Pública* 32: 36–42. [CrossRef]
- Buelga, Sofía, Begoña Iranzo, María-Jesús Cava, and Eva Torralba. 2015. Psychological profile of adolescent cyberbullying aggressors. *Revista de Psicología Social* 30: 382–406. [CrossRef]
- Buelga, Sofía, Belén Martínez-Ferrer, and María-Jesús Cava. 2017. Differences in family climate and family communication among cyberbullies, cybervictims, and cyber bully–victims in adolescents. *Computers in Human Behavior* 76: 164–73. [CrossRef]
- Calvete, Esther, Izaskun Orue, Ana Estévez, Lourdes Villardón, and Patricia Padilla. 2010. Cyberbullying in adolescents: Modalities and aggressors' profile. *Computers in Human Behavior* 26: 1128–35. [CrossRef]
- Campbell, Marilyn, and Sheri Bauman. 2018. *Reducing Cyberbullying in Schools: International Evidence-Based Best Practices*. Cambridge: Academic Press, ISBN 978-0-12-811423-0.
- Carrascosa, Laura, María Jesús Cava, Sofía Buelga, and Jessica Ortega. 2016. Relationships between family communication and different roles of bully-victim in school violence. In *Psicología y Educación: Presente y Futuro*. Coordinated by Juan Luis Castejón Costa. Alicante (España): ACIPE- Asociación Científica de Psicología y Educación, pp. 1454–62.
- Cava, María Jesús. 2011. Family, teachers and peers: Keys to support victims of bullying. *Psychosocial Intervention* 20: 183–92. [CrossRef]
- Cerezo, Fuensanta. 2006. Violencia y victimización entre escolares. El bullying: Estrategias de identificación y elementos para la intervención a través del Test Bull-S. *Electronic Journal of Research in Educational Psychology* 4: 333–51. [CrossRef]
- Cuesta Medina, Liliana, Cristina Hennig Manzuoli, Lady Adriana Duque, and Sayana Malfasi. 2018. Cyberbullying: Tackling the silent enemy. *International Journal of Inclusive Education* 1: 1–12. [CrossRef]
- Dehue, Francine, Catherine Bolman, and Trijntje Völlink. 2008. Cyberbullying: youngsters' experiences and parental perception. *CyberPsychology & Behavior* 11: 217–23. [CrossRef]
- Ditrendia Digital Marketing Trends. 2016. Informe Mobile en España y en el Mundo 2015. Available online: <https://ditrendia.es/wp-content/uploads/2015/07/Ditrendia-Informe-Mobile-en-Espa%C3%B1a-y-en-el-Mundo-2015.pdf> (accessed on 20 August 2018).
- Elsaesser, Caitlin, Beth Russell, Christine McCauley Ohannessian, and Desmond Patton. 2017. Parenting in a digital age: A review of parents' role in preventing adolescent cyberbullying. *Aggression and Violent Behavior* 35: 62–72. [CrossRef]
- Estévez, Estefanía, and Nicholas Emler. 2010. A structural modelling approach to predict adolescent offending behaviour from family, school and community factors. *European Journal on Criminal Policy and Research* 16: 207–20. [CrossRef]
- Fernández-Ballesteros, Rocío, and Benjamín Sierra. 1989. *Escalas de Clima Social FES, WES, CIES, CES*. Madrid: TEA Ediciones.
- Flisher, Alan J., Janet Evans, Martie Muller, and Carl Lombard. 2004. Brief report: Test–retest reliability of self-reported adolescent risk behaviour. *Journal of Adolescence* 27: 207–12. [CrossRef]
- Floros, Georgios D., Konstantinos E. Siomos, Virginia Fisoun, Evaggelia Dafouli, and Dimitrios Geroukalis. 2013. Adolescent Online Cyberbullying in Greece: The impact of parental online security practices, bonding, and online impulsiveness. *Journal of School Health* 83: 445–53. [CrossRef] [PubMed]
- Galvin, Kathleen M., Dawn O. Braithwaite, and Carma L. Bylund. 2015. *Family Communication: Cohesion and Change*. Abingdon: Routledge, ISBN 978-0-205-94523-8.
- Garaigordobil, Maite. 2011. Prevalencia y consecuencias del cyberbullying: Una revisión. *International Journal of Psychology and Psychological Therapy* 11: 233–54.
- Garaigordobil, Maite. 2017. Antisocial Behavior: Connection with Bullying/Cyberbullying and Conflict Resolution. *Psychosocial Intervention* 26: 47–54. [CrossRef]
- García-Maldonado, Gerardo, Víctor Manuel Joffre-Velázquez, Gerardo Jesús Martínez-Salazar, and Arturo Llanes-Castillo. 2011. Cyberbullying: A virtual way of bullying. *Revista Colombiana de Psiquiatría* 40: 115–30. [CrossRef]

- Goodyear, Victoria, and Kathleen Armour. 2018. Young people's perspectives on and experiences of health-related social media, Apps, and wearable health devices. *Social Sciences* 7: 137. [CrossRef]
- Hinduja, Sameer, and Justin W. Patchin. 2014. *Bullying beyond the Schoolyard: Preventing and Responding to Cyberbullying*. Thousand Oaks: Corwin Press, ISBN 978-1-4833-4993-0.
- Juvonen, Jaana, and Sandra Graham. 2014. Bullying in schools: The power of bullies and the plight of victims. *Annual Review of Psychology* 65: 159–85. [CrossRef] [PubMed]
- Kowalski, Robin M., Gary W. Giumetti, Amber N. Schroeder, and Micah R. Lattanner. 2014. Bullying in the digital age: A critical review and meta-analysis of cyberbullying research among youth. *Psychological Bulletin* 140: 1073–137. [CrossRef]
- Larrañaga, Elisa, Santiago Yubero, Anastasio Ovejero, and Raúl Navarro. 2016. Loneliness, parent-child communication and cyberbullying victimization among Spanish youths. *Computers in Human Behavior* 65: 1–8. [CrossRef]
- Larrañaga, Elisa, Santiago Yubero, and Raúl Navarro. 2018. Parents' responses to coping with bullying: Variations by adolescents' self-reported victimization and parents' awareness of bullying involvement. *Social Sciences* 7: 121. [CrossRef]
- Ledwell, Maggie, and Valarie King. 2015. Bullying and internalizing problems: Gender differences and the buffering role of parental communication. *Journal of Family Issues* 36: 543–66. [CrossRef]
- Lee, Changho, and Namin Shin. 2017. Prevalence of cyberbullying and predictors of cyberbullying perpetration among Korean adolescents. *Computers in Human Behavior* 68: 352–58. [CrossRef]
- Li, Qing. 2007. New bottle but old wine: A research of cyberbullying in schools. *Computers in Human Behavior* 23: 1777–91. [CrossRef]
- Livingstone, Sonia, Leslie Haddon, Anke Görzig, and Kjartan Ólafsson. 2011. *Risks and Safety on the Internet: The Perspective of European Children*. Full Findings. London: LSE, EU Kids Online.
- Machimbarrena, Juan Manuel, and Maite Garaigordobil. 2018. Prevalence of bullying and cyberbullying in the last stage of primary education in the Basque Country. *The Spanish Journal of Psychology* 21: E48. [CrossRef] [PubMed]
- Mishna, Faye, Mona Khoury-Kassabri, Tahany Gadalla, and Joanne Daciuk. 2012. Risk factors for involvement in cyberbullying: Victims, bullies and bully-victims. *Children and Youth Services Review* 34: 63–70. [CrossRef]
- Navarro, Raúl, Cristina Serna, Verónica Martínez, and Roberto Ruiz-Oliva. 2013. The role of Internet use and parental mediation on cyberbullying victimization among Spanish children from rural public schools. *European Journal of Psychology of Education* 28: 725–45. [CrossRef]
- Navarro, Raúl, Santiago Yubero, and Elisa Larrañaga. 2015. Psychosocial risk factors for involvement in bullying behaviors: Empirical comparison between cyberbullying and social bullying victims and bullies. *School Mental Health* 7: 235–48. [CrossRef]
- Odacı, Hatice, and Melek Kalkan. 2010. Problematic Internet use, loneliness and dating anxiety among young adult university students. *Computers & Education* 55: 1091–97. [CrossRef]
- Olenik-Shemesh, Dorit, Tali Heiman, and Sigal Eden. 2012. Cyberbullying victimisation in adolescence: Relationships with loneliness and depressive mood. *Emotional and Behavioural Difficulties* 17: 361–74. [CrossRef]
- Ortega-Baron, Jessica, Sofía Buelga, and María Jesús Cava. 2016. The influence of school climate and family climate among adolescents victims of cyberbullying. *Comunicar* 24: 57–65. [CrossRef]
- Ortega-Baron, Jessica, Sofía Buelga, María Jesús Cava, and Eva Torralba. 2017. School violence and attitude toward authority of student perpetrators of cyberbullying. *Journal of Psychodidactics* 22: 14–23. [CrossRef]
- Palermi, Anna Lisa, Rocco Servidio, Maria Giuseppina Bartolo, and Angela Costabile. 2017. Cyberbullying and self-esteem: An Italian study. *Computers in Human Behavior* 69: 136–41. [CrossRef]
- Pellegrini, Anne, and María Bartini. 2000. A longitudinal study of bullying, victimization, and peer affiliation during the transition from primary school to middle school. *American Educational Research Journal* 37: 699–725. [CrossRef]
- Povedano, Amapola, Estefanía Estévez, Belén Martínez, and María-Carmen Monreal. 2012. Un perfil psicossocial de adolescentes agresores y víctimas en la escuela: análisis de las diferencias de género. *Revista de Psicología Social* 27: 169–82. [CrossRef]
- Price, Megan, and John Dalgleish. 2010. Cyberbullying: Experiences, impacts and coping strategies as described by Australian young people. *Youth Studies Australia* 29: 51–59.

- Royne, Marla B., Claudia Rademaker, and Gerard E. Kelly. 2017. Powerful bullies and silent victims in cyber space: The darkness of social media. In *The Dark Side of Social Media*. Abingdon: Routledge, pp. 57–72. ISBN 978-1-351-6838-14.
- Şahin, Mustafa. 2012. The Relationship between the cyberbullying/cybervictimization and loneliness among adolescents. *Children and Youth Services Review* 34: 834–37. [CrossRef]
- Sasson, Hagit, and Gustavo Mesch. 2017. The role of parental mediation and peer norms on the likelihood of cyberbullying. *The Journal of Genetic Psychology* 178: 15–27. [CrossRef] [PubMed]
- Slonje, Robert, and Peter Smith. 2008. Cyberbullying: Another main type of bullying? *Scandinavian Journal of Psychology* 49: 147–54. [CrossRef] [PubMed]
- Smith, Peter K., Jess Mahdavi, Manuel Carvalho, Sonja Fisher, Shanette Russell, and Neil Tippett. 2008. Cyberbullying: Its nature and impact in secondary school pupils. *Journal of Child Psychology and Psychiatry* 49: 376–85. [CrossRef]
- Solecki, Susan M. 2016. An Exploratory Study on Parental Monitoring of Adolescent Cell Phone Use. Ph.D. Thesis, Drexel University, Philadelphia, PA, USA.
- Sorrentino, Anna, Anna Costanza Baldry, and Sonya Cacace. 2018. Cyberbullying in Italy. In *International Perspectives on Cyberbullying*. Berlin: Springer, pp. 231–49. ISBN 978-3-319-73262-6.
- Taiariol, Jennifer. 2010. Cyberbullying: The Role of Family and School. Ph.D. Thesis, Wayne State University, Detroit, MI, USA; p. 118.
- Trejos-Herrera, Ana M., Marly J. Bahamón, Yolima Alarcón-Vásquez, Jorge I. Vélez, and Stefano Vinaccia. 2018. Validity and Reliability of the Multidimensional Scale of Perceived Social Support in Colombian Adolescents. *Psychosocial Intervention* 27: 56–63. [CrossRef]
- Tsiplakides, Iakovos. 2018. Differentiation in higher education: The impact of parental education. *Social Sciences* 7: 28. [CrossRef]
- Varela, Rosa, María Elena Ávila, and Belén Martínez. 2013. Violencia escolar: Un análisis desde los diferentes contextos de interacción. *Psychosocial Intervention* 22: 25–32. [CrossRef]
- Watkins, Laura E., Rosalita C. Maldonado, and David DiLillo. 2016. The cyber aggression in relationships scale: A new multidimensional measure of technology-based intimate partner aggression. *Assessment* 25: 608–26. [CrossRef] [PubMed]
- Watts, Lynette K., Jessyca Wagner, Benito Velasquez, and Phyllis Behrens. 2017. Cyberbullying in higher education: A literature review. *Computers in Human Behavior* 69: 268–74. [CrossRef]
- Wegge, Denis, Heidi Vandebosch, Steven Eggermont, and Sarah Pabian. 2016. Popularity through online harm: The longitudinal associations between cyberbullying and sociometric status in early adolescence. *The Journal of Early Adolescence* 36: 86–107. [CrossRef]
- Ybarra, Michele L., and Kimberly Mitchell. 2004. Online aggressor/targets, aggressors, and targets: A comparison of associated youth characteristics. *Journal of Child Psychology and Psychiatry* 45: 1308–16. [CrossRef] [PubMed]
- Zych, Izabela, Rosario Ortega-Ruiz, and Inmaculada Marín-López. 2016. Cyberbullying: A systematic review of research, its prevalence and assessment issues in Spanish studies. *Psicología Educativa* 22: 5–18. [CrossRef]



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