The Family Context in Cybervictimization: A Systematic Review and Meta-Analysis

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Abstract

The use of Information and Communication Technologies is clearly widespread among adolescents from a young age. Although it poses a significant contribution at the academic, social, and emotional levels, it can also involve a set of important risks, including cyberbullying and, therefore, cybervictimization. Previous studies have pointed out the importance of family context since parental control and family communication emerge as contributors to this phenomenon. Therefore, the aim of the present study was to analyze the influence of family communication on cybervictims and the moderating role of different sociodemographic variables (age, gender, nationality, and culture), as well as social, emotional, and personality variables. In this context, a meta-analysis was performed with a random effects model, using a total meta-sample of 29,093 adolescents (mean age: 14.50 years) distributed in $k = 20$ samples belonging to nine studies on cybervictimization published in English in Q1 journals between 2015 and 2020. The results showed that family offensive communication is related to cybervictimization. This could be because the affected individuals often use social media to compensate for the deficiencies they perceive within their families, as well as to obtain support, which increases their time spent on the Internet and their exposure to this phenomenon. These findings highlight the need for family and community interventions, not only school-based or individual interventions.

Keywords

bullying, family issues and mediators, Internet and abuse, youth violence, community violence, cyberaggression

Introduction

Cyberaggression and Cyberbullying: Definition, Characteristics, and Prevalence

The social use of Information and Communication Technologies (ICT) implies an increase in communication and relational processes in the virtual scope. However, in the online world, as in the analogical world, there are also risks and aggressions (Álvarez-García et al., 2018). Cyberaggression and cyberbullying are two types of online violence carried out to harm a person or a group of persons through the use of ICT (Corcoran et al., 2015; Grigg, 2010; Pyżalski, 2012; Wachs et al., 2019). Nevertheless, while these terms are often used interchangeably in academic research, they represent distinct concepts (Kofoed & Staksrud, 2019; Rudnicki et al., 2022). Both concepts are somewhat vague, serving as an overarching label to encompass any online phenomena involving racial hate, aggression, and prejudice (Bliuc et al., 2018). Specifically, cyberbullying is commonly understood as encompassing repetitive, intentional acts of aggression carried out through electronic means against a victim who may have limited means to defend themselves (Aparisi et al., 2021). On the other hand, cyberaggression is a broader term that may include cyberbullying but is not limited to it. In fact, various other forms of cyberaggressive behaviors, such as impersonation, visual sexuality, happy slapping, and online exclusion, fall under the scope of cyberaggression (Rudnicki et al., 2022). Consequently, this study was specifically focused on cyberbullying.

In the cyberbullying phenomenon, victimization of other people takes place from the anonymity and emotional distance provided by the screens (Dennehy et al., 2020), and it can happen at any time. These risks can occur either as a one-time occurrence or persistently over time. In both cases, the victim

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becomes involved in a situation with multiple consequences in different areas of their life. These two realities, cyberbullying and cybervictimization, pose an increasing worldwide problem that affects a considerable number of children and adolescents of increasingly younger ages (Aboujaoude et al., 2015; Baldry et al., 2018; Betts et al., 2017).

Such behaviors have a negative psychological impact on their peers, affecting or destroying their social networks, which is a very important element at these ages. Degrading videos in WhatsApp, threats on Twitter, dissemination of images shared without consent, and offensive comments in forums and social networks such as Instagram and TikTok are some examples of this cyberbullying (Boniel-Nissim & Sasson, 2018; González-Cabrera et al., 2020). As a response to these attacks, the victim may choose to reduce the use they make of such devices and/or close their social networks, to avoid the problem (Myers & Cowie, 2019). The victim may also continue using these devices/networks as they did before suffering cyberbullying or increase the time of exposure as an emotional refuge (Machimbarrena et al., 2021). It is important to take into account that youth, already known as digital natives (or born in the digital era), use social networks not only as mere communication tools but also as cultural, leisure, or entertainment elements (Ren et al., 2022). In this sense, cybervictims can focus on online dynamics as a means of evasion or reduction of the discomfort caused by the cyberattack (Boniel-Nissim & Sasson, 2018; Sharif & Hoque, 2022). Similarly, social networks can favor the creation of profiles adjusted to their idealized self, allowing them to present themselves to the community as they wish to be perceived (Buelga et al., 2017).

Regarding the prevalence of cybervictimization, it is difficult to specify it, due to the great heterogeneity of results. For instance, rates ranging from 1.9% to 84% and from 14% to 57.7% have been reported by Camerini et al. (2020) and Zhu et al. (2021), respectively. However, the results show a higher rate of cybervictims than cyberbullies, which appears to be a common element in numerous studies (Henares-Montiel et al., 2022; Larrañaga et al., 2018; Quintana-Orts & Rey, 2018; Vale et al., 2018).

Factors Involved in Cybervictimization

Many variables are evaluated when analyzing cybervictimization. Some studies (Aboujaoude et al., 2015; Buelga et al., 2015) report that, with increasing age and autonomy, the rates of cyberbullying increase and, consequently, the risk of being a cybervictim also increases. This phenomenon seems to be related to the effects of disinhibition and empathy (Wang et al., 2022), which strengthen the emotional detachment and indifference between the aggressor and the victim (Kowalski et al., 2014; Zych et al., 2016). However, other studies concluded that age was not relevant (Hood & Duffy, 2018; Katz et al., 2019; Livazović & Ham, 2019), with some authors even stating that cyberbullying decreases with increasing age (Giménez-Gualdo et al., 2015; Myers & Cowie, 2019; Slonje et al., 2013). Another study variable is gender, where, once again, heterogeneous results are found. Most studies indicate that the rate of cybervictims is higher in women than in men (Evangelio et al., 2022; Larrañaga et al., 2016; Mishna et al., 2012; Zych et al., 2016). This could be because men present greater impulsiveness and lower empathy, whereas women are less likely to perpetrate violent acts (Christov-Moore et al. 2014; Mestre et al., 2009). Moreover, a recent study has demonstrated that girls show poor self-concept clarity, stronger fatalism, and low levels of presence of meaning in life, which are all related to cybervictimization (Geng et al., 2022). However, other studies point out that gender is an irrelevant variable (Álvarez-García et al., 2018; Katz et al., 2019; Tokunaga, 2010; Smith et al., 2008).

Consequences

There is a set of personal, school (peer relationships), peer coexistence, and family relation factors that are postulated as differential factors (Álvarez-García et al., 2018; Fulantelli et al., 2022). The social and affective consequences that cybervictims encounter increase the complexity of the intervention. In fact, the scientific evidence shows the difficulty of carrying out effective educational interventions (Ng et al., 2022) and the seriousness of the emotional and social aftereffects for the victims, and even for their families (Álvarez-García et al., 2018; Buelga et al., 2017). Cybervictims present rates of internalizing psychological and psychosocial problems that affect their well-being, their psychological adjustment, and their quality of life (Boniel-Nissim & Sasson, 2018; Gonzalez-Cabrera et al., 2020). The most frequent consequences include rage, frustration, academic problems, social anxiety, sadness and/or depression, and emotional problems (Baier et al., 2019; Copp et al., 2021; Livazović & Ham, 2019; Yang et al., 2021).

Importance of Family Context

In this line, there are a set of precipitating factors to suffer cyberbullying, such as difficulties in socioemotional skills (Hemphill et al., 2012; Livazović & Ham, 2019) and living in stressful environments (Boniel-Nissim & Sasson, 2018). Another essential element, both protective and catalytic, is family. Positive intrafamily communication, based on assertiveness and understanding, has been shown to be a protective element in the victim (Boniel-Nissim & Sasson, 2018; Larrañaga et al., 2016; Soh et al., 2017). Similarly, an upbringing based on reflective and empathetic behavior is regarded as a protective element (Álvarez-García et al., 2018), whereas an authoritarian style is related to high rates of cybervictimization (Garaidordobil & Navarro, 2022; Moreno-Ruiz et al., 2019). Furthermore, some studies point out both its irrelevance and the opposite (Hood &

Duffy, 2018; Kokkinos et al., 2016; Rajendran et al., 2016), and other studies associate the *laissez faire* style with high victimization rates (Baldry & Farrington, 2007; Gómez-Ortiz et al., 2014; Kaufmann & Charney, 2000). In line with the above mentioned, permissive and overprotective parents may prevent their children from developing basic social skills or even their capacity to set boundaries and defend themselves (Charalampou et al., 2018; Dehue et al., 2012).

Lastly, it is important to highlight the relevance of parental control over the use of the Internet, which is considered to be a key variable when interacting with digital media (Katz et al., 2019; Laurin et al., 2015). Thus, there is a strong relationship between the application of restrictive and punitive behaviors on ICT and a high rate of cyberbullying (Boniel-Nissim & Sasson, 2018; Li et al., 2016). Likewise, irresponsible control is also associated with a high rate of cyberbullying (Katz et al., 2019), whereas the knowledge of the parents about the activities of their children on the Internet and their support in the resolution of conflicts reduces the rates of both cybervictimization and cyberbullying (Elsaesser et al. 2017; Hood & Duffy, 2018; Katz et al., 2019).

Research Objective

In this context, the mentioned variables are of vital importance, as the consequences derived from bullying situations can be partially alleviated through the development of actions that promote proper emotional and social development, fostering positive relationships at both the intrapersonal and interpersonal levels.

Particularly, it is essential to highlight the crucial role played by these variables and the influence of families in cyber victimization situations, as well as to investigate whether family relationships, communication patterns, and parental control can mitigate or exacerbate the risk of cyber victimization and the potential psychological, emotional, and social effects that may arise from it.

Therefore, the aim of this study was to analyze the influence of family communication on victims of cyberbullying through ICT and the moderating role of different sociodemographic, social, emotional, and personality variables previously identified in scientific literature.

Consequently, the following hypotheses were established:

H1. There is a significant relationship between the role of family communication and the role of cyberbullying victims.
H2. Sociodemographic variables are of small relevance.

Method

The meta-analysis was conducted following the manual for systematic reviews of Cochrane in Higgins and Green (2011) and PRISMA (2021). The inclusion and exclusion criteria were established following the guidelines of Botella and Sánchez (2015) and Moreau and Gamble (2020). The following inclusion criteria were set:

- Sample age: adolescents aged between 11.5 and 18 years. The reason for selecting this age range is that, according to meta-analyses on the age variable in cyberbullying, the onset of cyberbullying begins at 11 to 12 years of age and decreases significantly around the age of 18 years (Holfeld & Mishna, 2019).
- Methodological nature of the articles: empirical and quantitative (Izquierdo-Martínez, 2007).
- Publication date: The search was performed in 2020 and the last 5 years were searched to obtain the most recent published papers (between 2015 and 2020), according to recommendations from Borestein et al. (2009).
- Methodological rigor. This review gathered studies with recognized prestige, published in Q1 and Q2 journals (*Scimago Journal & Country Rank*) or journals indexed in JCR (Egger et al., 2001).
- Psychometric tests assessed through academic publications (Izquierdo-Martínez, 2007).
- Language: studies published in English.

The following exclusion criteria were set:

- Adolescent population with special educational needs (SEN) as their main trait. However, this review accepted those studies in which the SEN students posed a standard measure according to the normal curve, since students with educational needs may experience higher rates of cyberbullying, which can bias the results (Humphrey & Symes, 2010).
- Studies without quantitative data and with methodological errors and instruments that were either inadequately assessed or not adapted to the participating population (Hunter & Schmidt, 2004; Friese & Frankenbach, 2020).

The search strategy followed the parameters of Botella and Gambara (2002) and was carried out from three databases: PsychINFO, WOS, and Science Direct. The search was conducted in April and May 2021. After successive search strategies, it was concluded that the Boolean action that best comprised the terminology related to the research question was: "cyberbullying AND family style OR parental style OR family communication" (see Figure 1). These searches produced a large number of studies. With the aim of narrowing down the results, the following measures were established.

- PsychINFO: "keywords," "peer reviewed journal," "human," "English," "test and measurement," 2015 to 2020.

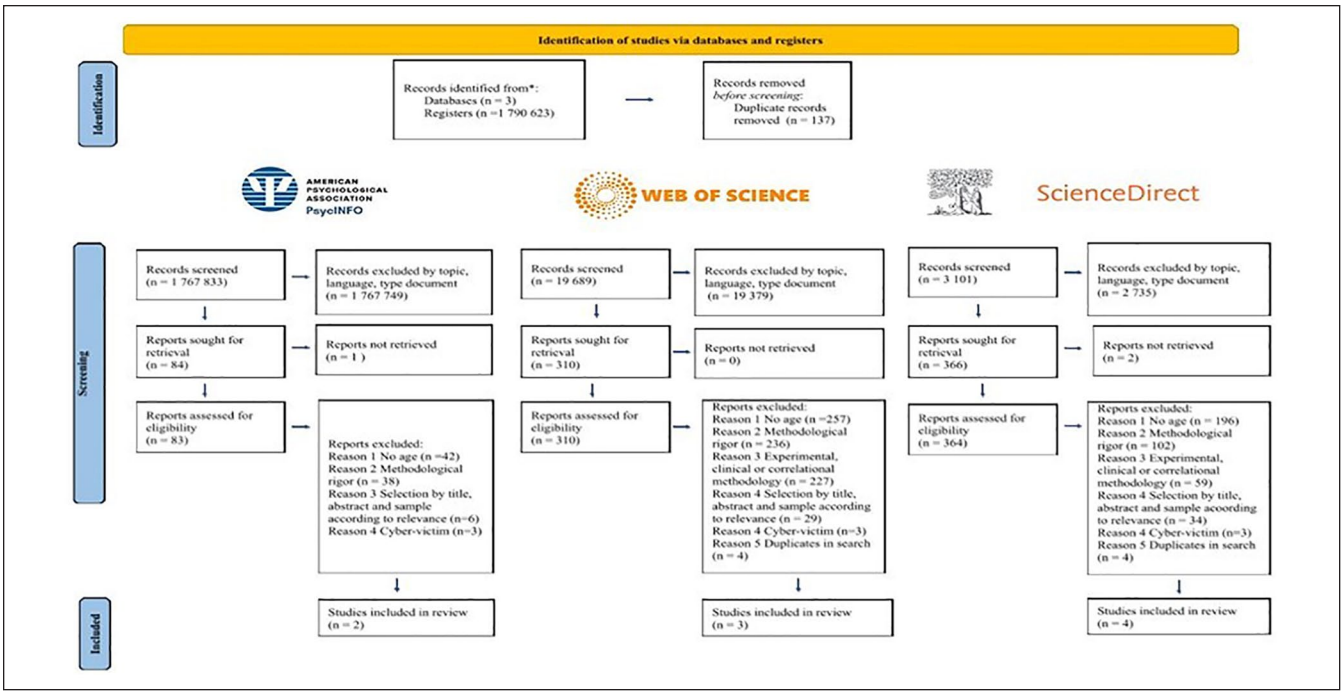

Figure 1. Flowchart.

- WOS: "title," and type of "article," "open Access," 2015 to 2020.
- Science Direct: "title, abstract, keywords," "article," "open Access," 2015 to 2020

The selection of studies was conducted according to the criteria established by the manual of systematic reviews of Cochrane in Higgins and Green (2011) and PRISMA (2021), which describe the criteria for the eligibility of the studies that make up the sample.

The coding of the studies was performed manually. All the articles produced by the search were systematically reviewed, and those that met the abovementioned inclusion criteria were selected. A determinant aspect that significantly reduced the sample was the criterion of psychometric test assessment since numerous studies did not show clear references to the authorship of the instrument or used ad hoc questionnaires. Furthermore, the criterion of methodological rigor led to the rejection of a large number of studies since unacceptable errors were detected in the measurement of the instruments, with the most frequent case being the fact that the means and standard deviations of the total scores were not properly provided.

The statistical transformation to Fisher's *Z*-values (Martin-Andrés & Luna del Castillo, 2004) was carried out using the statistical software CMA (Biostat, United States of America). This program was used to perform publication bias tests (Egger) to guarantee the quality and reliability of the data. We also calculated statistics about heterogeneity, meta-regressions, and comparison of models, and obtained figures such as Forest Plots, Funnel Plots, and meta-regression Fisher's *Z* graphs.

Results

Demographic Description

This study included a total of 29,093 participants distributed in $k=20$ samples belonging to nine studies. Regarding gender, 14,342 of the participants were women, 14,161 were men, and 72 adolescents did not indicate their sex or gender (Gonzalez-Cabrera et al., 2020). The average age of the sample was 14.50 years.

It is important to highlight the heterogeneity in the sample sizes. The smallest sample size was 175 participants (Hood & Duffy, 2018; Katz et al., 2019), whereas the largest sample size was 12,285 participants (Gonzalez-Cabrera et al., 2020). With regard to culture, social anthropology highlights the need to attend to cultural diversity (Molano, 2007). With respect to geographic dispersion (about the total samples), 0.6% were from Australia, 1.78% from Croatia, 5.62% from Cyprus, 11.51% from Israel, and 80.48% from Spain. That is, the major culture was European, with 87.89% of the total sample, followed by Euro-Asian culture (11.51%) and Australian culture (0.6%). The information obtained was self-reported by the adolescents, thereby representing their perception of family communication and the rest of the variables assessed (Table 1).

Table 1. Sociodemographic Data of the Sample.

Authors	Age	*SD* Age	Sample	Men	Women	Country	Culture	Communication	Parental Role
Álvarez-García et al. (2018)	14.01	1.39	3,059	1,556 *a	1,503 *a	Spain	Europe	AAC = affection and communication as a measure of parenting control	Father and mother
Boniel-Nissim and Sasson (2018)a	14.19	1.34	1,000	470 *c	530 *c	Israel	Euro-Asia	Positive mother child communication	Father and mother
Boniel-Nissim and Sasson (2018)b	14.19	1.34	1,000	470 *c	530 *c	Israel	Euro-Asia	Positive father communication	Father and mother
Boniel-Nissim and Sasson (2018)c	14.19	1.34	1,000	470 *c	530 *c	Israel	Euro-Asia	Poor parent child communication	Father and mother
Charalampous et al. (2018)a	11.72	1.20	818	370 *c	448 *c	Cyprus	Euro-Asia	Authoritarian style communication (part of authority-based educational style)	Father and mother
Charalampous et al. (2018)b	11.72	1.20	818	370 *c	448 *c	Cyprus	Euro-Asia	Authoritarian style communication (part of authority-based educational style)	Father and mother
Gonzalez-Cabrera et al. (2020)*	14.69	1.73	12,285	6,032 *a	6,181 *a	Spain	Europe	Autonomy and relationship with parents	Father and mother
Hood and Duffy (2018)	14.82	1.52	175	93 *a	82 *a	Australia	Oceania	Parenting control	Father and mother
Katz et al. (2019)a	13.25	0.81	175	86 *a	89 *a	Israel	Euro-Asia	Perceived general parenting control style	Father and mother
Katz et al. (2019)b	13.25	0.81	175	86 *a	89 *a	Israel	Euro-Asia	Perceived general parenting autonomy supportive style	Father and mother
Livazović and Ham (2019)a	19	No data	259	57 *b	202 *b	Croatia	Europe	Quality of family relationships	Father and mother
Livazović and Ham (2019)b	19	No data	259	57 *b	202 *b	Croatia	Europe	Parenting control	Father and mother
Buelga et al. (2017)a	14.52	1.62	1,062	547 *a	515 *a	Spain	Europe	Open Communication mother (as a form of control of new technologies)	Mother
Buelga et al. (2017)b	14.52	1.62	1,062	547 *a	515 *a	Spain	Europe	Offensive communication mother (as a form of control of new technologies)	Mother
Buelga et al. (2017)c	14.52	1.62	1,062	547 *a	515 *a	Spain	Europe	Avoidant communication mother (as a form of control of new technologies)	Mother
Buelga et al. (2017)d	14.52	1.62	1,062	547 *a	515 *a	Spain	Europe	Open Communication father (as a form of control of new technologies)	Father
Buelga et al. (2017)e	14.52	1.62	1,062	547 *a	515 *a	Spain	Europe	Offensive communication father (as a form of control of new technologies)	Father
Buelga et al. (2017)f	14.52	1.62	1,062	547 *a	515 *a	Spain	Europe	Avoidant communication father (as a form of control of new technologies)	Father
Ortega Baron et al. (2018)a	14.5	1.62	849	438 *a	411 *a	Spain	Europe	Avoidant communication mother (as a form of control of new technologies)	Mother
Ortega Baron et al. (2018)b	14.5	1.62	849	438 *a	411 *a	Spain	Europe	Avoidant communication father	Father

All the studies present several samples. This is because they are comparative, or longitudinal, studies. To favor data transparency, a letter has been alphabetically assigned in order of appearance: a, b, c, etc., to each sample.
*= The sample presents 72 adolescents who did not provide their gender; 6,032 were males and 6,181 were females. *a = The research treated this variable as biological sex. *b = The research treated this variable as cultural gender.
*c = The research talks about gender but uses terms such as male and female that refer to biological sex.

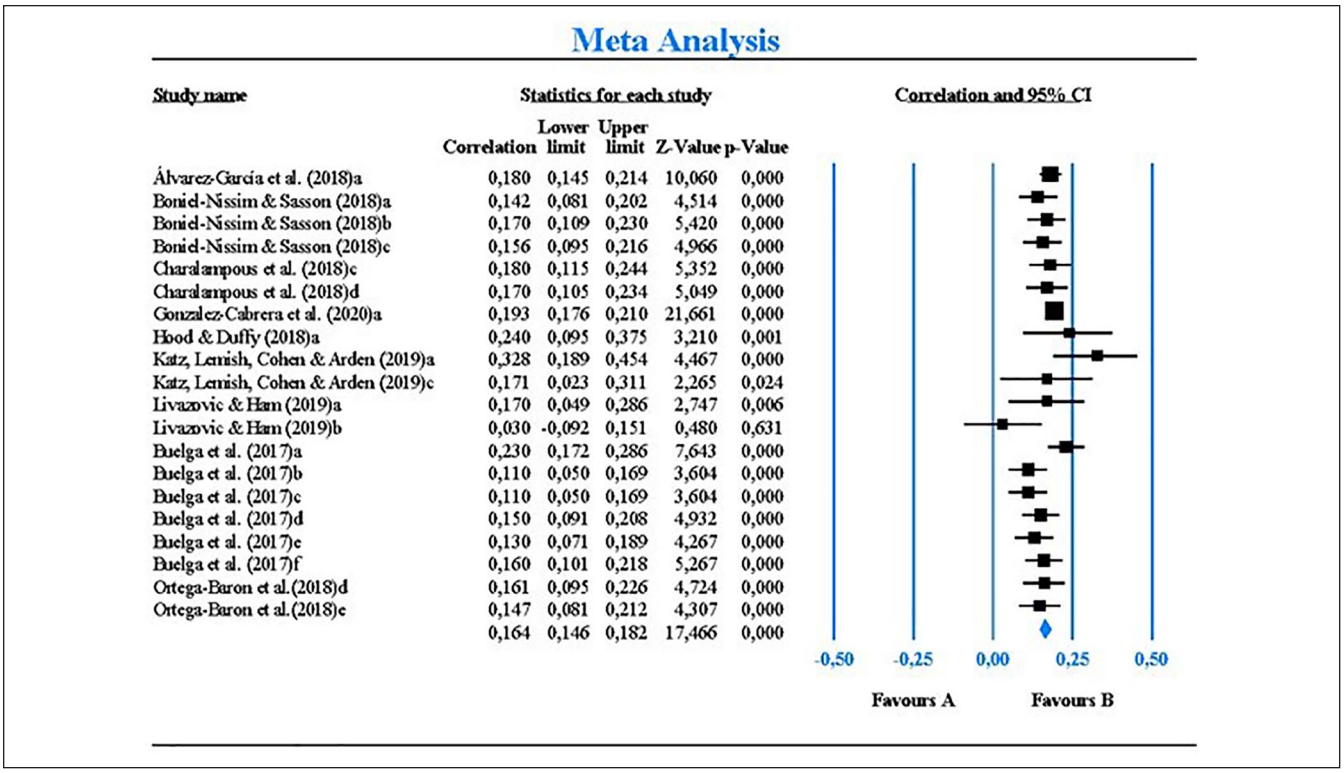

Figure 2. Forest plot.

Statistical Analyses

Due to their diversity, the statistics and measures had to be converted to Fisher's *Z*-values (Martin-Andrés & Luna del Castillo, 2004), to ensure that they could all be compared.

The Forest plot in Figure 2 shows a small effect size ($r=.16$, $p<.000$, 99% CI: lower limit=0.14; upper limit=0.18). It should be noted that approximately half of the sample has negative values, while the other half of the meta-sample has positive values. In other words, we are faced with a difficult duality to answer since the samples with a negative view of the situation are very similar to those with a positive view. Consequently, it is necessary to explore the causes of this duality. Presenting these conversations responds to the "open materials" criterion of Moreau and Gamble (2020).

Regarding the heterogeneity of the sample, according to Cochrane in Higgins and Green (2011), there is high diversity (Table 2). The Q statistic of DerSimonian and Laird (1986) ($Q=33.83$, $df=19$, $p=.001$) produced high variability, which posed the rejection of the homogeneity hypothesis. Consequently, there is a high sample variability among the analyzed studies, which could be due to the origin of the samples, the assessment instrument used, gender, etc.

Statistic $I^2=43.84\%$ explains that 43.84% of the variability is caused by the heterogeneity of the sample and the diversity of methodologies and procedures used, as well as the sociodemographic characteristics of the participants (Sterne et al., 2011). Therefore, it is necessary to perform a meta-regression and a comparative study of models since there is evidence of moderating variables with high statistical values. This supports the hypothesis of high heterogeneity, which is characteristic of studies conducted in human populations (Higgins et al., 2003). Moreover, it is necessary to follow the random effects model (Bonett & Price, 2015; Martín-Andrés & Luna del Castillo, 2004). Although one of the inclusion and exclusion criteria was to guarantee the quality and reliability of the data, it was considered necessary to carry out an Egger's test, with 99% reliability, to analyze the bias effect (Botella & Gambara 2002; Botella & Sánchez, 2015). The results showed the absence of publication bias, with a 99% confidence interval (*p-value one-tailed*=.06; *p-value two-tailed*=.12) (Eggers, 1997) (Table 3). Moreover, it is necessary to point out that the standard error was not high ($SE=0.53$), indicating proximity to the regression line and confirming the absence of publication bias (Martín-Andrés & Luna del Castillo, 2004).

Although the diversity and heterogeneity evidenced in the Q and I^2 statistics (Table 2) could pose the existence of extreme data, the narrow confidence interval (0.14, 0.18) should narrow down such heterogeneity. These data are in line with the Funnel Plot (Figure 3), which confirms the analyzed variability and heterogeneity. In this sense, it is necessary to highlight an aspect that could explain the existence of extreme data, in addition to the diversity of the data. Conversion to Fisher's *Z*-values, despite being

Table 2. Heterogeneity Statistics.

Model	Effect Size and 99% Interval			Test of Null (2-Tailed)		Heterogeneity				Tau-Squared		
Model	Point Estimate	Lower Limit	Upper Limit	*Z*-value	*p*-Value	*Q*-value	*Df* (Q)	*p*-Value	*I*-squared	Tau Squared	Standard Error	Variance
Fixed	0.17	0.16	0.18	30.06	<.00	33.83	19	.001	43.84	.001	0.001	.000
Random	0.16	0.14	0.18	17.46	<.00							

Table 3. Egger's Regression Test.

Intercept	−0.87
Standard error	0.53
99% lower limit (two-tailed)	−1.99
99% upper limit (two-tailed)	0.25
t-Value	1.68
Df	18
p-Value (one-tailed)	.06
p-Value (two-tailed)	.12

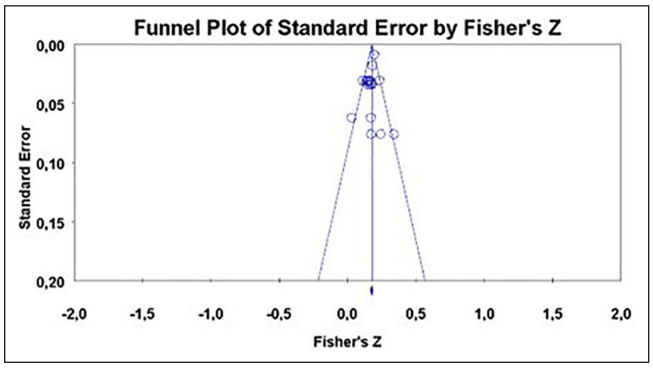

Figure 3. Funnel plot.

accepted in this type of methodology (Martin-Andrés & Luna del Castillo, 2004), poses a risk to the values of $x > 0.5$. This is due to the use of Student's *T* curve, which implies that these measures can be distorted, moving away from the mean values, compared to the normal curve. Therefore, despite the methodological quality, the studies of Katz et al. (2019) and Charalamopous et al. (2018) are far from the inside of the cone.

Moderating Variables and Meta-Regression Analysis

The articles that make up the sample show the existence of moderating variables. A meta-regression (Jak & Cheung, 2019) and a comparison of models could explain the high variability of results (Botella & Sánchez, 2015). However, most of the articles do not address, as the main topic, family communication and cyberbullying in victims. Consequently, the amount of moderating variables that can be statistically and quantitatively studied is reduced. Moreover, it is worth indicating that, in the entire sample, the data about communication between parents and children are provided through the perspective of the children, whereas communication is addressed as a means of parental control through which the parents establish a communication channel with their children (cyberbullying victims) about new technologies.

The model comparison test produced eight models based on the moderating variables: age (model 2), gender (men, model 3), gender (women, model 4), country (model 5), culture (model 6), communication style (model 7), and family bonds (model 8), as well as the simple model to compare (model 1). Although, in this case, the communication begins from the mother, father, or both, some studies report differences in the established communication. Therefore, according to Borestein et al. (2009) and Jak and Cheung (2019), model meta-regression and comparison are based on the variable "general communication" (the category in which they are analyzed in general) for model 7 (family communication) and on the variable "both parents" (the category in which the studies do not differentiate parent gender) to determine the existence of differences between fathers and mothers for model 8 (family bond). Of these, only model 7 (communication styles) was significant. In this case, the differences in communication (perceived by the children) explain 45% of the variance, with a strongly significant *p*-value (Table 4).

Meta-regressions were carried out to explore the non-dichotomous variables: country (model 5), geographic area (model 6), family communication style (model 7), and family bonds (model 8). In this sense, there were no differences between countries (model 5) or geographic areas (model 6); similarly, no differences were detected between mother communication (coefficient = −0.02, $SE = 0.02$; $Z = -1.01$, $p = .31$) and father communication (coefficient = −0.02, $SE = 0.02$; $Z = -1.28$, $p = .19$), with set values ($Q = 2.11$; $df = 2$; $p = .34$). However, there were significant differences in the family communication model (model 7). In this sense, we found an important difference with respect to offensive communication, finding a negative relationship that differentiates from the rest of the communication styles in the families with children who are victims of cyberbullying (coefficient = −0.06, $SE = 0.02$; $Z = 2.30$, $p = .02$). Thus, we found that not only the communication style as a means of parental control explains

Table 4. Model Comparison: Random Effects (MM), *Z*-distribution, Fisher's *Z*.

Model Name	TauSq	R^2	*Q*	*df*	*I*-value
Model 1 simple	.02	.00	.00	1	<.00
Model 2 age	.0007	.05	2.04	18	.15
Model 3 men	.0006	.12	.73	18	.39
Model 4 women	.0006	.09	.58	18	.44
Model 5 country	.0006	.17	3.02	18	.55
Model 6 culture	.0008	.18	1.43	17	.48
Model 7 communication	.004	.45	17.21	14	.01
Model 8 parental role	.0006	.21	2.11	17	.34

45% of the variance, but offensive styles present a different relationship with respect to the rest (Table 5). To sum up, with the increasing rate of cybervictimization, offensive communication decreases significantly. Similarly, without significant values, it was found that authoritarian, evasive, and poor styles decreased, whereas positive styles increased, although very slightly and non-significantly. Therefore, it is necessary to review the literature following the PICO (Patient, Intervention, Comparison and Outcome) parameters of PRISMA (2021) to explain these findings.

Discussion

A large number of variables are analyzed when addressing cybervictimization. The main objective of this study was to analyze the influence of family communication on cybervictims, controlling for potential moderating variables at the sociodemographic, social, emotional, and personality levels.

First, with regard to sociodemographic variables, one of the most widely studied is age. In the present study, no relationship was found between age and cybervictims, while some studies have shown a positive association between age and cybervictimization, with a greater proportion of victims of older ages (Kowalski & Limber, 2007). Nevertheless, other studies, such as those of Hood and Duffy (2018), Katz et al. (2019), and Livazović and Ham (2019), did not find significant differences when evaluating the prevalence of victims, suggesting that age does not modulate this relationship. However, some authors have shown that, with increasing age, adolescents are more likely to engage in cyberbullying behavior (Utomo, 2022). In this sense, in our sample, the average age was below 15 years, which could partially explain why no relationship was found, although it is important to note that new avenues of cyberbullying are emerging. Some countries regulate the use of social networks and do not allow children under 14 to register on them (European Union, 2016). However, many video games nowadays have a social networking component that can encourage cyberbullying and cyber victimization (Makarova & Makarova, 2019; Przybylski, 2019).

The relevance of gender in cyberbullying is unclear. In our study, gender does not influence cybervictimization. However, a recent meta-analysis (Lozano-Blasco et al., 2023) points out that gender has a slight influence on cybervictimization, with women being the most affected. In this regard, some works report that women are more likely to be victims (Buelga et al. 2017; Garaigordobil & Machimbarrena, 2019; Garaigordobil et al., 2016; Gonzalez-Cabrera et al., 2020; Larrañaga et al., 2016; Moreno-Ruiz et al., 2019; Zych et al., 2016). Alternatively, other studies interpret that gender does not seem to be a statistically significant predictor of cybervictimization (Álvarez-García et al., 2018; Katz et al., 2019; Tokunaga, 2010). In our study, gender has no influence on cybervictimization, although the rise of technology promotes accessibility to electronic devices for both boys and girls. Therefore, these results may indicate a shift in the pattern of aggression, with a decrease in face-to-face interactions and an increase in relational aggression carried out online by boys, as social interactions are mostly mediated through technology (Bozzola, 2021). It is true that girls tend to exhibit indirect aggression, while boys conduct direct aggression (Card et al., 2008). However, there are other elements to consider. In this sense, although boys spend more hours on the Internet, girls are more aware of excessive use of the Internet (Liu et al., 2011). Liu et al. explain the importance of family communication, as parents should increase their involvement with their children, especially boys. More specifically, this author explains that the behaviors that should and should not be carried out ought to be reinforced at home (Willems et al., 2023).

Regarding the geographic area, it was found that the variable is not related to the phenomenon. This fact may be due to the inclusion of zones that contain countries classified as high-income countries, where continuous access to electronic devices and the Internet is expected. This undoubtedly contributes to the existence of cyber aggression. However, it is important to highlight that the majority of studies conducted on this topic are carried out in middle- and high-income countries, which can introduce a bias in the results they provide (Chudal et al., 2021; Zhu et al., 2021).

With respect to the variables related to the time of use of the Internet, there is no consensus in the scientific evidence in terms of connection time and suffering from cyberbullying. In this sense, some studies point out that, with increasing time using the Internet, exposure to cyberbullying, rejection, and receiving offensive messages also increases (Festl & Quandt, 2013; Leung and Lee, 2012), whereas other studies do not find a direct relationship with cybervictimization (Álvarez-García et al., 2018; Hood & Duffy, 2018). However, there is consensus in the scientific evidence regarding the excessive use of the Internet by cybervictims as a means of evasion (Chaves-Álvarez et al., 2019; Lin, et al., 2020; Şimşek et al., 2019). Analogously, social networks allow

Table 5. Meta-Regression by Parental Style.

Covariate	Coefficient	Standard Error	99% Lower	99% Upper	*Z*-value	Two-sided *p*-value
Intercept	0.1878	0.0145	0.1593	0.2162	12.93	.0000
communication style: authoritarian	−0.0109	0.0311	−0.0718	0.0499	−0.35	.7247
communication style: evasive	−0.043	0.0237	−0.0894	0.0034	−1.82	.0694
communication style: offensive	**−0.0672**	**0.0293**	**−0.1245**	**−0.0098**	**−2.3**	**.0217**
communication style: poor	−0.0305	0.0396	−0.108	0.0471	−0.77	.441
communication style: positive	0.0123	0.0233	−0.0579	0.0333	0.53	.5997

adolescents to generate self-idealized profiles, hiding identity traits in an anonymity process that favors the appearance of a mixed role, where the role of cybervictim merges with that of cyberbully (Buelga et al., 2017).

With respect to the family variables, the analysis was focused on two important factors: parental styles and parental control.

In relation to the first factor, the results indicate that parental styles do not show a significant relationship with cybervictimization. However, there is a slight and nonsignificant increase in positive parental styles and a decrease in evasive, authoritarian, or poor styles in these situations. Previous research differs, as some studies showed that the authoritarian parental style has been related to victimization (Makri-Botsari & Karagianni, 2014; Ortega Baron et al., 2018; Stavrinides, et al., 2015), whereas other authors did not find a relationship or even detected a lower probability of cybervictimization when the parental style was authoritarian (Hood & Duffy, 2018; Kokkinos et al., 2016; Rajendran et al., 2016). On the other hand, the flexible style also predicts victimization (Gómez-Ortiz et al., 2014), since, by being more exposed to cyberspace without supervision (Dehue et al., 2012), they lack the strategies to defend themselves in cases of victimization (Charalampou et al., 2018). Nevertheless, the communication established within the family is a significant and moderating variable. Although there are no differences in family communication based on gender, that is, between mothers and fathers, offensive family communication with children who are victims of cyber aggression does play a determining role. Therefore, among all the analyzed variables, this style of communication by the family shows the strongest association with cybervictimization. This fact could be attributed to the association between a negative family climate, characterized by offensive communication, and the perpetuation of cybervictimization behaviors. The affected individuals often use social media to compensate for the deficiencies they perceive within their families, as well as to obtain support, which increases their time spent on the Internet and their exposure to this phenomenon (Buelga et al., 2017; Ortega et al., 2018).

Lastly, some studies have found that the parents of cybervictims present lower parental control over the use of the Internet, that is, the parent's knowledge about the behavior of their children on the Internet reduces the rates of cybervictimization (Elsaesser et al., 2017; Hood & Duffy, 2018). This contradicts other studies, such as those conducted by Livazović and Ham (2019), who did not find any relationship. Therefore, it seems important to teach parents to monitor the use that their children make of the Internet (Hood & Duffy, 2018). More specifically, children receive help from their parents to solve social problems when they are involved in a case of cybervictimization (Katz et al., 2019).

Another variable that is related to cyberbullying and cybervictimization is peer relationships. Rejection from peers and the lack of friends who support them are associated with victimization. That is, the negative perceptions of the children toward the relationships with their classmates increase the possibility of victimization (Bacchini et al., 2009), whereas friendship and support from classmates act as a protective measure against victimization (Charalampous et al., 2018). Similarly, those students who report feeling connected to their school are less likely to be cybervictims (Cross et al., 2016; Livazović & Ham, 2019).

Moreover, although these variables were not analyzed in this meta-analysis, it is also essential to study socio-affective variables. Numerous studies have analyzed cybervictimization and its significant relationship with internalizing psychological and psychosocial problems (Boniel-Nissim & Sasson, 2018), which affects psychological well-being and adjustment, as well as the quality of life (Gonzalez-Cabrera et al., 2020).

Cybervictimization is associated with negative experiences, such as rage, frustration, academic problems, social anxiety, sadness and/or depression, and emotional problems (Tomsa et al., 2013; Zalaquett & Chatters, 2014).

The studies of Livazović & Ham (2019) indicate that adequate management and correct control of socioemotional skills are protective factors against being a cybervictim (Hemphill et al., 2012). On the other hand, having little social skills and low social competence are associated with being a cybervictim (Livazović & Ham, 2019). In this regard, the communication style exhibited by the child can be crucial, as children who have a passive communication style and low social skills are often targets of bullies. Similarly, the use of the Internet allows these children to express themselves freely when lacking social skills and eliminates fear,

thereby increasing the risk of being victims of bullying due to the increased time spent using the Internet (Antoniadou et al., 2019; Demaray et al., 2021; Ding et al., 2020).

These socioemotional responses can be compared to those found in studies about traditional bullying (Hobbs, 2009).

Furthermore, having been a victim of offline abuse or a cybervictim is also a risk factor for being a cyberbully (Álvarez-García et al., 2018). In this line, adolescents who have been victims of offline bullying are more likely to become victims of cyberbullying and, as a result, they themselves develop more inadequate and violent behaviors (Boniel-Nissim & Sasson, 2018). Studies such as those of Hood and Duffy (2018) report that the strongest predictor of participation in cyberbullying is having experienced cybervictimization oneself. This can be attributed to the observational learning of aggression, which is advocated by Bandura's Social Learning Theory (1978). According to this theory, individuals can learn new behaviors and attitudes by observing and modeling the behavior of others, especially when they identify with them. Although this theory refers to the need to observe behaviors, some authors such as Kokkinos et al. (2016), Buelga et al. (2017), and Mishna et al. (2012) state that, due to the effect of disinhibition and concealment of identity, cybervictims may be predisposed to participating in online retaliation attacks, which could explain why this double role (cybervictim–cyberbullying) is much more common in the virtual environment than in traditional bullying (Baldry et al., 2018; Betts et al., 2017; Garaigordobil et al., 2016).

In a conclusion, the parenting communication style is crucial in cybervictimization, surpassing other moderating variables such as age or gender. These findings highlight the need for family and community interventions, not only school-based or individual interventions.

Limitations, Future Research, and Practical Applications

Although the present work represents an important contribution to the understanding of the phenomenon of cybervictimization, it is not without limitations. First, the meta-sample shows a scientific divide between first-world countries and developing countries. Thus, all the studies that met the inclusion criteria were European and/or Australian. This poses a handicap to study the reality in other geographic areas, such as Africa, Asia, and America. Furthermore, it is important to consider that our sample is normative, although certain groups, such as students with SEN, appear to experience higher rates of cyberbullying. Therefore, we propose conducting a new meta-analysis to examine the relationship between having learning difficulties or special needs and being a victim of cyberbullying. Moreover, 86% of the sample came from a single article, despite the fact that the meta-sample was composed of 20 samples from 9 different studies. This indicates the importance of conducting international longitudinal studies that allow covering large populations, to ensure that the samples are as representative as possible. Finally, given that the search for articles was carried out in 2020, it is necessary to update the review and include papers that also analyze the important role of COVID-19.

Furthermore, cybervictimization can start at younger ages, and there may be variability in the prevalence and influence of such variables at other ages. In this sense, it is proposed for future research to analyze the role of the family in early childhood and its relationship with the phenomenon of cybervictimization. Another important aspect to take into account in future studies is the diversity of cybervictimization. In line with the above mentioned, it would be interesting to study the role of the family in processes such as sexting, sextortion, couple violence in social networks, and other types of situations. Similarly, it is also necessary to study the diversity of methods used in their measurement.

In practical terms, the findings of this study contribute to clarifying the variables related to family communication and cybervictimization in adolescents. These results are useful for the design and implementation of programs that aim to prevent this problem in the most effective way possible. For that reason, some potential implications of the findings are provided. It is well known that family has a strong influence and plays a key role in preventing cybervictimization. It is important to emphasize the significance of communication based on reflective, empathetic, participatory, and mutually respectful behaviors, where aggression and attitudes that promote aggression are not tolerated. Similarly, it is necessary to work on digital literacy, especially in the appropriate use of social networks, instant messaging programs, and platforms. These media enable immediate and impulsive actions, as well as a lack of empathy since the consequences of one's actions on the victims are not witnessed. Therefore, it is necessary to implement prevention programs in educational institutions to address overexposure to ICT and its misuse from early educational stages and provide training on the risks of misuse of ICT. Similarly, it is essential to implement programs for emotional education to promote proper management of intrapersonal and interpersonal skills, fostering empathy, respect, positive communication, and effective conflict resolution. It is important to teach adolescents how to cope with possible social pressures from their peer groups, establishing parent–school partnerships to promote democratic parenting styles with clear rules and boundaries (avoiding authoritarian control) and positive communication. The way parents emotionally relate to and communicate with their children is a crucial variable in this prevention and intervention process.

Critical Findings

1. The communication style as a means of parental control explains 45% of the variance, but offensive styles present a different relationship with respect to the rest. When the rate of cybervictimization increases, offensive communication decreases significantly.
2. Country or geographic area did not influence cybervictimization
3. Parental gender did not influence on cybervictimization

Implications for Practice, Policy, and Research

1. It is important to know what children are doing on the Internet.
2. Family support is crucial in cyberbullying and cybervictimization.
3. It would be interesting to study the role of the family in processes such as sexting, sextortion, couple violence in social networks, and other types of situations.

Credits

RLB: Conceptualization, Methodology, Formal analysis, software, Writing original draft. Writing—review; editing. ABC: Conceptualization. Methodology. Writing original draft. Writing review; editing. BRG: Methodology, Formal analysis, software. AST: Writing original draft. Writing—review; editing.

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