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RISK AND PROTECTIVE FACTORS RELATED TO CYBERBULLYING AMONG ADOLESCENTS: A SYSTEMATIC REVIEW

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El presente estudio es una revisión sistemática de las investigaciones realizadas sobre los factores de riesgo y los factores protectores relacionados con el ciberbullying entre adolescentes. La búsqueda se realizó en las bases de datos Web of Science, PsycARTICLES, EBSCOhost, Science Direct Journals, Scopus y Springer Journals. Luego de aplicar los criterios de inclusión a los 234 artículos encontrados inicialmente, se tuvo como resultado un total de 39 artículos que conformaron la muestra final. El N total de las muestras fue 173.179 adolescentes. La investigación con la muestra más pequeña tuvo 90 participantes y la muestra más grande estuvo conformada por 72.327 personas. Los factores de riesgo y los factores protectores están relacionados con el uso de Internet y las Tecnologías de la Información y la Comunicación, aspectos familiares, sociales, psicológicos e individuales. La información consignada en esta revisión sistemática deja ver la importancia de programas de intervención que prevengan y atiendan el ciberbullying, en los que se involucre a la familia, la escuela y la sociedad.
Palabras clave: *Ciberbullying, Factores de riesgo, Factores protectores, Adolescentes.*

The present study is a systematic review of the research on the risk and protective factors related to cyberbullying among adolescents. The research was carried out in the databases Web of Science, PsycARTICLES, EBSCOhost, Science Direct journals, Scopus and Springer journals. Applying the inclusion criteria to the 234 articles initially found, resulted in a total of 39 articles that made up the final sample. The total N of all the samples was 173,179 adolescents. The research with the smallest sample had 90 participants and the largest sample was made up of 72,327 participants. The risk and protective factors are related to the use of the Internet and information and communication technologies, family, social, psychological, and individual aspects. The information contained in this systematic review shows the importance of intervention programs that prevent and address cyberbullying, involving family, school, and society.
Key words: *Cyberbullying, Risk factors, Protective factors, Adolescents.*

The use of electronic information and digital media such as social media, blogs, email, text messages, mobile phones, etc. to harass others psychologically intentionally, aggressively and repeatedly, whether an individual or a group, is what is known as cyberbullying (Linne & Angilletta, 2016; Lucas-Molina, Pérez-Albéniz, & Giménez-Dasí, 2016; Menay-López, & Fuente-Mella, 2014).

Understanding cyberbullying from a health perspective involves taking into account the psychosocial aspects that affect its appearance or prevention. These aspects include the risk and protective factors related to this problem. According to Amar, Abello, and Acosta (2003), risk factors are scientifically established elements that show a causal relationship with a given problem. Any exposure, characteristic or behavior that increases the probability of suffering a health problem, can be considered as a risk factor (Tifani, Chiesa, Caminati, & Gaspio, 2013). It should be stressed that when talking of risk factors, the discussion should not focus solely on the individual, since risks can also be present in families, communities, and environments (Gómez, 2008).

On the other hand, the protective factors are those that reduce the likelihood of presenting a risk behavior or affecting health (Amar, Abello, & Acosta, 2003). Protective factors can also be defined as aspects that promote health and are related to well-being (Góngora & Casullo, 2009). These are characteristics, circumstances, attributes, and conditions aimed at achieving the integral health of people (Gómez, 2008). In addition, protective factors reduce the vulnerability of the subjects and promote resistance to damage; this type of factor includes genetic, psychological, situational, and social variables (González-Arratia, Valdez, Oudhof, H., & González, 2012).

Some authors have identified the risk and protective factors to which adolescents are most exposed. Among the main risk factors in adolescence are the following: the consumption of legal and illegal psychoactive substances, conflictive family relationships, lack of social support from the state, the influence of the media that impede the development of critical thinking, being male, having low religiosity, and depressive symptoms (Páramo, 2011; Campo-Arias, Cogollo, & Díaz, 2008). Among the protective factors most related to adolescence are the

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following: support and assistance from the family, participation in group and community activities, permanent communication between parents and children, and the connection with the academic world and the world of work (Páramo, 2011). Other protective factors related to the family are the fact that parents talk to their children about the risks of drug use and irresponsible sexual practices; as well as having good relationships with siblings and other family members (Gómez, 2008).

The aim of this article is to analyze, interpret and evaluate the results of the studies reviewed that address the role of risk and protective factors in situations of cyberbullying among adolescents enrolled in school, in order to create a state of the art to serve as a reference to other researchers and, especially, to psychologists who are involved in dealing with this type of problem.

METHOD

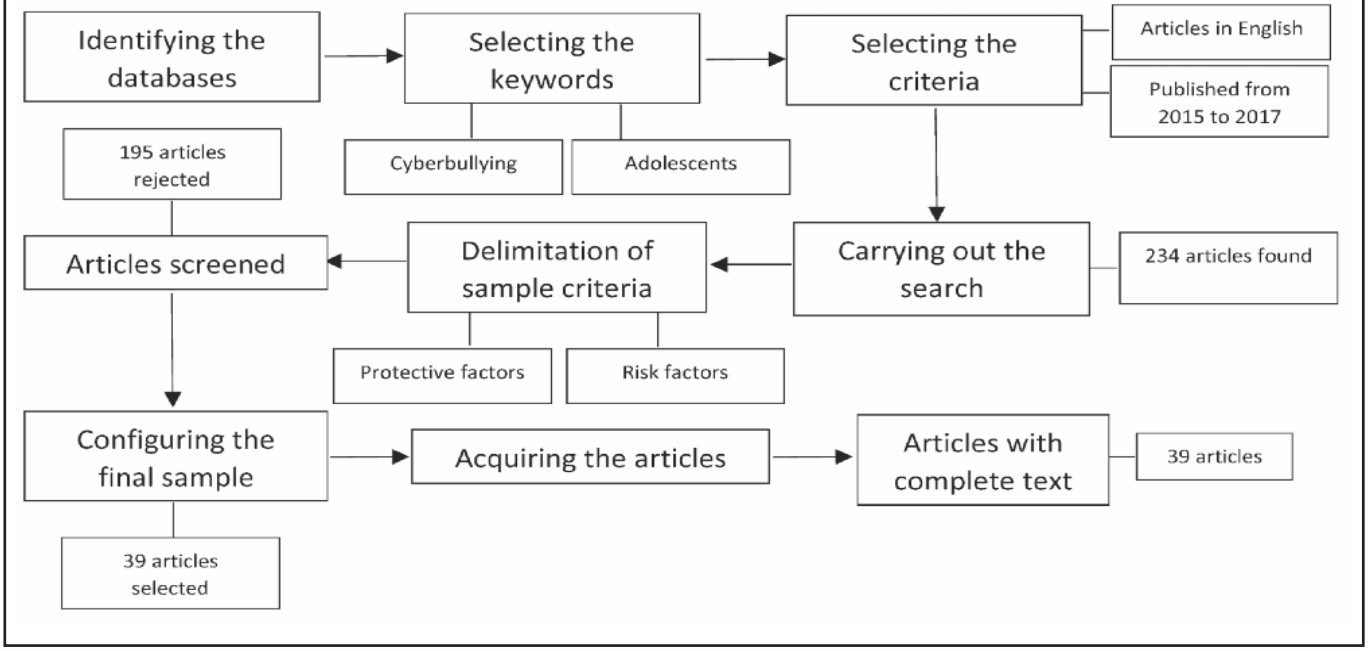
This systematic review included research articles on risk and protection factors associated with cyberbullying among adolescents attending school. The article search was carried out between March 2018 and February 2019 in the following databases: Web of Science, PsycARTICLES, EBSCOhost, Science Direct Journals, Scopus and Springer Journals. We analyzed studies published over a period of three years (2015, 2016, and 2017) in peer-review journals. The sample was limited to articles published in English, since this is the most widely used language in the field of science. In addition, the articles that made up the sample are those that appear in the indexing platforms and journals with the highest impact in the world, and they are published in English in their entirety. The search terms in the title, the abstract and or keywords and the Boolean operators were: 1) "cyberbullying" AND ("risk factors" OR "protective factors"), and 2) "cyberbullying" AND "associated factors". The open access articles were downloaded in PDF format, and paid ones were acquired by the University of San Buenaventura Medellín.

RESULTS

A total of 234 articles were found on cyberbullying among adolescents enrolled in school, of which 39 research articles were selected that specifically address the risk and protective factors related to this problem. The articles that made up the sample were published in English in peer-reviewed scientific journals of high impact. Articles were excluded that did not present research results, did not include adolescents enrolled in school or did not deal with risk and protective factors. When there were duplicate articles in several databases, only one was selected to be part of the sample.

The countries in which the investigations were conducted were the following: Spain (6), United States (6), Germany (3), Turkey (3), Israel (3), Portugal (2), United Kingdom (2), South Korea (2), Italy (2), England (2), Canada (2), Belgium (2), Denmark, Romania, Ireland, Thailand, Greece, Taiwan, Holland, and Singapore. The age range of the population that participated in the research was between 9 and 20 years. Regarding the sample, the minimum number of participants in a study was 90

FIGURE 1
PROCESS FOR SELECTING THE SAMPLE



and the maximum number was 72,327. In all of the investigations together there were 173,179 adolescents enrolled in school. In terms of sex, the range of females was between 21.5% and 67.9%. With regards to the instruments used for data collection, 26 studies used questionnaires, 1 study used self-reports, 27 investigations used scales, 2 investigations conducted online surveys and 1 study used telephone interviews.

With regards to the risk factors found in the articles that were analyzed in this systematic review, the following are referenced:

Internet and ICT use: cyber victims often use computers, digital social networks and instant messaging software; they use the Internet for more than three hours during weekends, even if they have few technological skills; they allow others to upload to the Internet their videos and personal photographs; they suffer cyber bullying at an early age; they have a high perception of the anonymity offered by inhabiting the Web; they usually access the Internet from a café; they are regular users of online videogames; they carry out risky behaviors such as disclosing personal information; and they seek support and permanent interaction in social networks. On the other hand, among the risk factors linked to cyber aggressors are the tendency to use the Internet frequently, having a high perception of anonymity, playing videogames online, carrying out risky behavior on the Internet, and publishing personal information or photos/videos of themselves.

Family and social aspects: Regarding the victims of cyberbullying, risk factors were found to be having had experiences of traditional bullying, school absenteeism, technical supervision in the use of digital technologies by their parents, low social support and a feeling of loneliness, being part of a racial or ethnic minority, presenting communication problems with parents, added to parental authoritarianism, having a history of sexual abuse in childhood, and having few social resources. As regards the aggressors, their low level of relationship with their teachers, permanent school absences, the perception of having little company, social pressure from other adolescents who are cyber-aggressors, an authoritarian parenting style, coupled with low parental competence in issues such as, for example, little involvement in school tasks of their children, violent behavior, participating in situations of delinquency, and consumption of illegal substances or alcohol.

Psychological and individual aspects: Studies report that cyber victims present risk factors related to psychological and individual aspects such as: presenting favorability towards the prototype of the harasser, high justification of cyber bullies, and feeling guilty. With regard to sex, the research reports that both being male and being female are risk factors. The following risk factors are also recorded: low self-esteem and low empathy, being in a lower grade at school with respect to the aggressors, feeling anger and frustration, having a history of mental health problems, a perception of low self-efficacy, and low levels of body esteem. While the risk factors related to cyber bullies are the following: belonging mainly to the male gender, moral detachment from the victim's situation, distorting the consequences of their own behavior, blaming the victims for their situation, having low levels of self-esteem, little empathy, alexithymia, and high levels of aggression.

Regarding the protective factors, the studies report the following:

Internet and ICT use: The main protective factors for victims are not having a computer and spending as little time as possible on the Internet while being aware that their activity on the network is being monitored, which gives a low perception of online anonymity. The studies do not report protective factors related to aggressors regarding the use of Internet and ICT.

Family and social aspects: One of the most important protective factors to prevent cybervictimization is open communication with parents about the risks of virtual environments, another is using information and communication technologies in a conscious way, having social support, especially maternal support, receiving demonstrations of affection from parents, and having positive experiences at school. Regarding cyber bullies, the studies report as protective factors the knowledge that parents have about the risks of the use of social networks, as well as active and restrictive parental mediation in the use of Internet. For both aggressors and victims, parental control with regards the use of technology is a protective factor.

Psychological and individual aspects: In relation to the victims, being female with high levels of empathy, being resilient, having low levels of impulsivity, not justifying the aggressors, and having high self-esteem. Regarding cyberbullying, only low favorable attitude towards cyberbullying is reported.

DISCUSSION

The concern for the study of risk and protective factors related to cyberbullying is not trivial. It is known, for example, that exposure to violent events in the different contexts in which the subject interacts leads to a greater likelihood of learning and replicating this type of behavior throughout their psychosocial development, consolidating a cycle of violence that hampers the development of skills or competencies that facilitate conflict resolution in a peaceful manner (Chaux, 2012). This is the reason why some of the studies included in this systematic review consider that one of the risk factors related to cyberbullying is having participated in traditional bullying situations, while others focus on aggression and violence exposed in the media, including the Internet. In the same vein, the findings of this study coincide with those found by Gifre and Guitart (2012), who understand that violent behaviors come from social learning strengthened in environments such as the family, the community, and the school, and reinforced by technologies such as television, the Internet, and video games. So, by imitation or from the teaching transmitted by their circle of social influence, imaginary and representations are constructed that are related either with prosocial behavior, or, in the opposite case, legitimizing violent actions (Ember, 1997; Moscovici, 1987; Gonzales, 2008).

TABLE 1
STUDIES ON CYBERBULLYING THAT IDENTIFY PROTECTIVE AND RISK FACTORS (N= 39)

Study	Country	Sample	Instruments	Protective factors	Risk factors
Álvarez-García, D., Núñez, J., Dobarro, A. & Rodríguez, C. (2015).	Spain	N=3,180 11-19 years 51.5% women	Ad hoc questionnaire about sociodemographic data and handling of communication technologies. Cybervictimization Questionnaire (Álvarez-García, Dobarro, & Núñez, 2015). Cybervictimization Risk Factors Questionnaire (Dobarro & Álvarez-García, 2014).	Self esteem(cyber victim)	Victimization at school offline (cyber victim) Using social networks and instant messaging software (cyber victim) Using the Internet for more than three hours a day on weekends Engaging in risky behavior on the Internet, for example: "I allow other people to upload my photos or videos to the Internet " (cyber victim)
Athanasiades, C., Costanza A., Kamariotis T., Kostouli M. & Psalti A. (2016).	Greece	N=440 12-14 years 46.1% women	Self-report checklist		Frequent use of the Internet (mainly use of SNS) (cyber victim and cyber bully) Male gender (cyber bully)
Barkoukis, V., Lazuras, L., Ourda, D. & Tsorbatzoudis, H. (2016).	Greece	N=355 13-17 years 55.5% women	Moral disengagement Likert Scale (Bandura et al., 1996). The Basic Empathy Scale (Jolliffe & Farrington, 2006) A Likert scale for measuring attitudes A Likert scale for measuring social norms A Likert scale for measuring behavior expectations A Likert scale for measuring prototypes		Moral disengagement considered as the cognitive assessment of the misbehavior and its effects, as well as the victim's assessment (cyber victim and cyber bully) High favorability towards the cyber bully prototype (cyber victim and cyber bully) Distortion of consequences, for example: minimizing the adverse effects on victims (cyber victim and cyber bully) Attribution of guilt (blaming the victim) (cyber victim and cyber bully)
Barlett, C. (2015).	United States	N=96 15 years 56% women	Anonymity subscale of the Attitude and Strength Differential Scale (Barlett & Gentile, 2012). The Positive Attitudes towards Cyberbullying Questionnaire (Barlett & Gentile, 2012). Scale for measuring cyberbullying (Ybarra et al., 2007). Demographic questionnaire.	Female gender (Cyber victim) Low attitudes of cyberbullying (Cyber victim) Low perception of anonymity (Cyber victim) Not having a history of cyberbullying behavior (cyber victim)	The early behavior of cyberbullying (cyber victim) Male gender(cyber victim) Attitudes of cyberbullying (cyber victim) High perception of anonymity (cyber victim and cyber bully)
Beyazit, U., im ek, & Bütün, A. (2017).	Turkey	N=417 14-16 years 56.7% women	Cyberbullying Scale (Arıcak, Kınay, & Tanrıkulu, 2012)		Having profiles in social networks (cyber victim and cyber bully) Frequently using the Internet (cyber victim and cyber bully)
Brewer, G. & Kerslake, J. (2015).	England	N=90 16-18 years 51% women	Cyber Bullying Inventory (Topcu & Erdur-Baker, 2010) UCLA Loneliness Scale (Russell, Peplau & Ferguson, 1978) Toronto Empathy Questionnaire (Spreng, KcKinnon, Mar & Levine, 2009) Rosenberg Self-Esteem Scale (Rosenberg, 1965)		Low self-esteem (cyber victim and cyber bully) Low empathy (cyber victim and cyber bully) Feeling alone (cyber victim and cyber bully)

TABLE 1
STUDIES ON CYBERBULLYING THAT IDENTIFY PROTECTIVE AND RISK FACTORS (N= 39) (Continuation)

Study	Country	Sample	Instruments	Protective factors	Risk factors
Buelga, S., Martínez-Ferren, B. & Cava, M. (2017).	España	N= 1,062 12-18 years 48.5% women	The Adolescent Victimization through Mobile Phone and Internet Scale (Buelga, Cava & Musitu, 2010) The Cyberbullying Scale (Buelga & Pons, 2012) The Family Environment Scale (Spanish adaptation by Fernández–Ballesteros & Sierra, 1989) The Parent–Adolescent Communication Scale (Barnes & Olson, 1982; Spanish adaptation by Estévez, Musitu & Herrero, 2005)	Family climate (cyber victim) Family communication (cyber victim)	Offensive communication (cyber victim) Evasive and non-open communication (cyber victim)
Çakır, Ö., Gezgin D. & Ayas, T. (2016).	Turkey	N=622 Age=NR 21.5% women	Cyberbullying/Cybervictim Scale (Ayas & Horzum, 2011)	Not having a computer or access to the Internet (cyber victim) Being aware that activities on the Internet are being monitored (cyber victim) Spending less time on the Internet(cyber victim)	Being in a lower grade school (cyber victim) The frequency of access to the computer and the Internet (cyber victim) Accessing the Internet in a cafe (cyber victim) Having low levels of technological skills Parents with low academic levels (cyber victim)
Carvalho, M., Branquinho, C. & Gaspar de Matos, M. (2017).	Portugal	N=6,026 10-19 years 52.3% women	Questionnaire (Currie, et al., 2012)		Drinking alcohol (cyber victim and cyber bully) Consuming drugs (cyber victim and cyber bully) Getting involved in problems (cyber victim and cyber bully) Aggressive and violent behavior (cyber victim and cyber bully)
Chang, F., Chiu, C., Miao, N., Chen, P., Lee, C., Huang, T. & Pan, Y. (2015).	Taiwan	N=72,327 15 years 49% women	Questionnaire for measuring perpetration of cyberbullying, cyber harassment, exposure to media violence, Internet risk behavior, bullying and victimization, effectiveness of cyberbullying resistance and sociodemographic characteristics	Resistance to cyberbullying (cyber victim)	Use of online games (cyber victim and cyber bully) Exposure to violence in social networks (cyber victim and cyber bully) Risk behaviors on the Internet, such as personal information sent or published (cyber victim and cyber bully) Cyberbullying and bullying with experiences of intimidation (cyber victim and cyber bully)
Davis, K. & Koepke, L. (2015).	United Kingdom	N=2,079 11-19 years 57% women	Anonymous online survey	Strong relationships with parents (cyber victim) Positive experiences at school (cyber victim)	

TABLE 1
STUDIES ON CYBERBULLYING THAT IDENTIFY PROTECTIVE AND RISK FACTORS (N= 39) (Continuation)

Study	Country	Sample	Instruments	Protective factors	Risk factors
Den Hamer, A. & Konijn, E. (2015).	Holland	N=1,005 11-17years 51% women	Cyberbullying questionnaire (Calvete, Orue & Estévez, 2010) Content-based Media Exposure Scale (Den Hamer & Konijn, 2014)		Anger (cyber victim) Frustration (cyber victim) Mental health problems. (cyber victim) Moral detachment. (cyber victim)
Eden, S. Heiman, T. & Olenik-Shemesh, D. (2016).	Israel	N=1.094 NR 48% women	Cyberbullying Questionnaire (Smith et al., 2008) Multidimensional Scale for Social Support, (Zimet, Dahlem, Zimet, and Parkley, 1988) The Loneliness Questionnaire created by Williams and Asher, translated and adapted by Margalit (1991) Self-efficacy Questionnaire by Muris (2001) Well-being questionnaire (Diener et al. 1985)		Having suffered traditional bullying (cyber victim) Perception of low social support (cyber victim) Perception of low self-efficacy (cyber victim) Feeling of loneliness (cyber victim)
Fahy, A., Stanfeld, S., Smuk, M, Smith, N., Cummins, S. & Clark, C. (2016)	England	N=2,480 11-12 years NR	Questionnaire for measuring depressive symptoms, social anxiety, and mental well-being Scale for measuring cyberbullying (Ybarra, 2007)		Depressive symptoms (cyber victims) Social anxiety (cyber victims)
Festl, R. (2016)	Germany	N=1,4281 1-18 years 50% women	Questionnaire for measuring perpetration of cyberbullying, previous experiences of intimidation, individual cognitions, variables of individual control, technical resources, and social predictors		Low social resources (cyber victim)
Festl, R. & Quandt, T. (2016)	Germany	N= 3,515 13-17 years 56% women	Questionnaire for measuring cyberbullying, online social activities, and commitment to risky behavior online Content-based Media Exposure Scale (Hamer & Konjin, 2015)		Intensive use of online social networks(cyber victim) High exposure to television, Internet, and video games (cyber victim) The use of drugs and alcohol (cyber victim and cyber bully) Delinquency (cyber victim and cyber bully) Sexually risky behaviors, for example: high sharing of inappropriate publications, photos or videos of oneself (cyber victim and cyber bully)
Gámez-Gaudix, M. & Gini, G. (2016).	Spain	N= 750 13-18 years NR	The Cyberbullying Questionnaire (Calvete et al., 2010; Gámez-Guadix et al., 2014) Justification of Cyberbullying Scale (Gámez-Guadix et al., 2014) The impulsive–irresponsible subscale of the Spanish version of theYouth Psychopathic Inventory (van Baardewijk et al., 2010)	Low justification of the aggressions (cyber victim) Low impulsivity (cyber victim)	High justification of the aggressions (cyber bully) High impulsivity (cyber bully)

TABLE 1
STUDIES ON CYBERBULLYING THAT IDENTIFY PROTECTIVE AND RISK FACTORS (N= 39) (Continuation)

Study	Country	Sample	Instruments	Protective factors	Risk factors
Garaigordobil, M. & Machimbarrena, J. (2017)	Spain	N=1,993 9-13 years 49.8% women	Cyberbullying: Screening of Peer Harassment (Garaigordobil, 2013) Parental Stress Scale (Berry & Jones, 1995; adaptation by Oronoz, Alonso-Arbiol & Balluerka, 2007) *Escala de Competencia Parental Percibida -versión padres/madres* [Perceived Parental Competence Scale – parent version] (Bayot & Hernández, 2008) *Escala de identificación de Prácticas Educativas Familiares -versión para hijos* [Family Educational Practices Identification Scale - child version] (Alonso & Román, 2003) Perceived Parental Competence Scale-parents (Bayot & Hernández, 2008)	Parental involvement (demonstration of affection, dedication and supervision). (cyber victim)	Low parental competence (getting involved in children's homework, shared leisure, parental support, etc.) (cyber bully) Authoritarian parental style (cyber victim and cyber bully)
Hebert, M., Cénat, J., Blais, M., Lavoie, F. & Guerrier, M. (2016)	Canada	N=8,194 14-18 years 57.8% women	Dichotomous questionnaire about child sexual abuse.The relationship with the mother was measured through the Parent and Peer Attachment (IPPA) questionnaire. Likert scale for measuring bullying y cyberbullying. Self-esteem, anguish, and suicidal ideation were measured using the Self-Description Questionnaire (Marsh & O'Neill, 1984).	Maternal support (cyber victim)	Being a woman (cyber victim and cyber bully) Having been sexually abused in childhood (cyber victim)
Hinduja, S. & Patchinb, J. (2017)	United States	N= 1.204 12-17 years NR	The Connor-Davidson Resilience 25-item self-report scale (Connor & Davidson, 2003)	Resilience (cyber victim)	
Ho, S. & Liang Chen, A. (2017)	Singapore	N=1,424 13-17years 48.6% women	Likert scales for measuring attitude, subjective norms, descriptive norms, unfair norms, active mediation and restrictive mediation The demographic variable was measured by the level of education of each student.	Low favorable attitude towards cyberbullying (cyber bully) Active and restrictive mediation of the use of the Internet by parents (cyber bully) Parental knowledge about the risks of using social networks (cyber bully)	Social pressure of peers who are cyber bullies (cyber bully)
Larrañaga, E., Yubero, S., Ovejero, A. & Navarro, R. (2016)	Spain	N= 1.607 12-18 years 54.6% women	Cyberbullying Questionnaire (Estévez, Villardón, Calvete, Padilla, & Orue, 2010). Loneliness Scale UCLA (Valkenburg & Peter, 2007). The parent-child communication scale (Barnes & Olson, 1985)	Open communication with parents. (cyber victim)	Feelings of loneliness. (cyber victim) Problems of communication with parents (cyber victim) Unhealthy use of Internet. (cyber victim)

TABLE 1
STUDIES ON CYBERBULLYING THAT IDENTIFY PROTECTIVE AND RISK FACTORS (N= 39) (Continuation)

Study	Country	Sample	Instruments	Protective factors	Risk factors
Lee, C. & Shin, N. (2017)	Korea	N=4,000 Age=NR 45.9% women	Likert scale for measuring cyberbullying, the perpetration of cyberbullying, experiences of victimization and experience of violence offline The empathy scale (Shin, 2012) The Korean Children and Youth Panel Survey (National Youth Policy Institute, 2012) The scale for satisfaction with school life (Hwang & Kim, 2012) The demographic variables were the groups of gender and type of school.	Development of cognitive empathy (cyber victim)	Males that play video games online (cyber victim and cyber bully) Use a chat platform (Kakaotalk) (cyber victim and cyber bully) Having been bullied at school (cyber victim)
Merril, R. & Hanson, C. (2016)	United States	N=13,583 NR NR	Online questionnaire		Being a woman (cyber victim) Belonging to a racial or ethnic minority (cyber victim)
Meter, D. & Bauman, S. (2015)	United States	N=1,272 NR 42% women	Binary questionnaire for measuring the use of social networks Likert scale for measuring the frequency of sharing social network passwordsLikert scale for measuring cyberbullying		Having accounts on several social networks (Cyber victim and cyber bully)
Navarro, J., Clevenger, S., Beasley, M. & Jackson, L. (2015)	United States	N=1,748 12-17 years 48.6% women	Telephone interviews Teens and Digital Citizenship Survey (Pew Research Center, 2011)		The use of SNS (cyber victim)
Navarro, R., Yubero, S. & Larrañaga, E. (2015)	Spain	N=1,058 10-12 years 51.6% women	Cyberbullying victimization and perpetration (Calvete, Orue &, Estévez, 2010) The Social Involvement Scale (Fitzpatrick and Bussey, 2011) The Self-Efficacy Questionnaire for Children (Muris, 2001) Four items from the inventory developed by Armsden and Greenberg (1987) to measure closeness with friends The Social companionship, affectionate and emotional/information scales (Leung, 2011) Reputation Enhancement Scale (Carroll, Houghton, Hattie & Durkin, 2009)	Trust and open communication between parents and children (cyber victim)	The lack of social company (social support) (cyber victim and cyber bully)
Olenik-Shemesh, D. & Heiman, T. (2017)	Israel	N=204 14-16 years 48% women	The Student Survey Questionnaireof Cyberbullying (Campbell, Spears, Slee, Butler & Kift, 2012) The Body esteem scale for Adolescents and Adults (Mendelson, Mendelson & White, 2001) The Multidimensional Scale of Perceived Social Support (Zimet,Dahlem, Zimet & Farley, 1988) Self-efficacy using the perceived self-efficacy questionnaire (Muris, 2001)	Social support	Low social support (cyber victim) Low body esteem (cyber victim) Traditional victimization (cyber victim) Low social self-efficacy (cyber victim)

TABLE 1
STUDIES ON CYBERBULLYING THAT IDENTIFY PROTECTIVE AND RISK FACTORS (N= 39) (Continuation)

Study	Country	Sample	Instruments	Protective factors	Risk factors
O'Neil, B. & Dinh, T. (2015).	Portugal Denmark Italy Romania United Kingdom Ireland	N=3,500 9-16 years NR	Internet Survey *Children Go Mobile*		Being a teenager (cyber victim) Intensive use of the Internet. (cyber victim)
Pabian, S. & Vandebosch, H. (2015)	Belgium	N=2,128 9-17 50.5% women	Self-reported Likert type scale of involvement in cyberbullying situation Self-reported Likert type scale of involvement in traditional bullying situation The attachment to the school was measured through the scale by Murdock and Phelps, adapted and translated by Muijs (1997)		Low level of attachment to teachers (cyber bully)
Palermiti, A., Servidio, R., Bartolo, G. & Costabile, A. (2017)	Italy	N= 438 10–20 years 57.1% women	The Daphne III Self-report Questionnaire on Cyberbullying (Genta, Brighi & Guarini, 2009) Questionnaire for measuring the relationship with parents regarding Internet use Rosenberg Self-Esteem Scale (Version by Prezza, Trombaccia, & Armento, 1997)	Parental control (cyber victim)	Low self esteem (Cyber bully)
Peker, A. (2015)	Turkey	N=400 NR 49% females	The Revised Cyber Bullying Inventory (Topçu & Erdur-Baker, 2010) Positive and Negative Affection Scale (Watson, Clark & Tellegens, 1988) Social Media Attitude Questionnaire (Düvenci, 2012)	Females with a high level of empathy(cyber victim) Consciously using information and communication technologies (cyber victim) Parental control of Internet use (cyber victim) The communication of parents about the possible risks of virtual environments (cyber victim)	Being a man with a low level of empathy (cyber victim) Greater weekly time of Internet use (more than 3 hours) (cyber victim) Low social attitude in social networks (cyber victim) Negative affect (cyber victim)
Sampasa-Kanyinga, H. (2015)	Canadá	N= 5,126 11-20 years 48% females	The Kessler Psychological Distress Scale (Kessler R., Andrews G, Colpe LJ, Hiripi E, Mroczek DK & Normand SL, 2002) Items were taken from the Centers for Disease Control andPrevention (CDC)'s Youth Risk Behaviour Survey for measuring suicidal behavior They used dichotomous measures to measure victimization due to cyberbullying and the use of social networks The MacArthur Scale of Subjective Social Status for measuring demographic variables		Mental problems such as depression (cyber victim) Seeking support and acceptance in social networks (cyber victim) Seeking interaction in social networks (cyber victim)

TABLE 1
STUDIES ON CYBERBULLYING THAT IDENTIFY PROTECTIVE AND RISK FACTORS (N= 39) (Continuation)

Study	Country	Sample	Instruments	Protective factors	Risk factors
Sasson, H. & Mesh, G. (2017)	Israel	N=495 10-18 years 46.2% women	Questionnaire of European Union (EU) Kids Online (2010) for measuring cyberbullying Likert scale for measuring online risk behavior Likert scale for measuring time online Likert scale for measuring exposure of online behaviors EU Kids Online (O'Neill & McLaughlin, 2010) for measuring parental mediation		Technical and social supervision by parents (cyber victim) Being a woman (cyber victim) Online behaviors such as exposing personal information and sending online messages with insults (cyber victim)
Wachs, S., Bilz, L., Fischer, M. & Wright, M. (2017)	Germany Thailand	N=1,549 12-18 years 67.9% women	The Mobbing Questionnaire for Students (Jäger, Fischer & Riebel, 2007) Two subscales of the twenty-item Toronto alexithymia scale (Bagby, Parker & Taylor, 1994)		Alexithymia (cyber bully)
Wright, M.F (2015)	United States	N=673 13 years 51% women	Likert scale for measuring the frequency of face-to-face aggression (Wright et al., 2012) Likert scale for measuring the frequency of aggression via the Internet (Wright & Li, 2013) Likert scale for measuring behavior in the class Academic performance was measured by student report card. Absenteeism was measured with the report issued by the school. Behavioral problems at school were measured by reporting discipline errors and student suspensions.		Absenteeism. (cyber victim and cyber bully)
Wright, M. F. (2017)	United States	N=568 13 years 52% women	Questionnaire for measuring parental mediation strategies Questionnaire for measuring cyberbullying	Parental control (cyber victim and cyber bully)	Low self esteem (cyber victim and cyber bully)
You, S. & Ah Lim. S. (2016)	Corea del Sur	N= 3.449 12-14 years 50% women	Cyber Bullying Inventory (Erdur-Baker & Kav ut, 2007) Questionnaire to measure the experiences of participation in harassment and off-line victimization during the last year Questionnaire for measuring psychological variables (self-esteem, aggression, lack of self-control, emotional regulation and sociability), a Likert scale was used.		Extensive use of the Internet (cyber victim and cyber bully) Experiences of traditional bullying (cyber victim) Lack of self-control (cyber bully) High levels of aggressiveness (cyber bully)

Note: NR = Used to refer to the fact that the revised article does not report on that aspect

Hoyos, Aparicio, and Córdoba (2005) state that one of the social factors related to the appearance of maltreatment among peers due to abuse of power, is the legitimization of violence, since society as a macrosystem maintains beliefs, roles, structures, and representations that contribute to reproducing violence in microsystems. In this way, contexts such as the family where the first processes of socialization usually take place, can favor the legitimization of forms of violence, insomuch as there are myths and beliefs implicitly present in the educational practices promoted by parents with their children, which may lead to their adopting common representations (Harto de Vera, 2016). Added to family conflicts (Buelga, Martínez-Ferren, & Cava, 2017), an authoritarian parental style (Garaigordobil & Machimbarrena, 2017) and communication problems with parents (Larrañaga, Yubero, Ovejero, & Navarro, 2016) constitute factors risk for teenagers related to cyberbullying.

On the other hand, as previously noted, as cyberbullying has a relational nature, low social attitude in social networks (Peker, 2015) and seeking support and acceptance in social networks (Sampasa-Kanyinga, 2015) are other risk factors associated with this problem. These aspects are related to various processes specific to the group, such as the need for belonging, social identity and acceptance in the group, which are transferred from the traditional relationship of the face-to-face encounter to the virtual relationship.

Another group of risk factors, identified as individual factors, coincide with those found in studies of bullying. In this sense, low empathy is a risk factor for bullying situations (Del Barrio, Almeida, van der Meulen, Barrios, & Gutiérrez, 2003; Hoyos, Aparicio, Heilbron, & Schamun, 2004; Pepler, 2007; Avilés, 2013) and for cyberbullying (Brewer & Kerslake, 2015; Peker, 2015). Likewise, moral detachment is a common factor in bullying (Bandura, Caprara, Barbaranelli, Pastorelli, & Regalia, 1996; Canchila, Hoyos, & Valega, 2018) and in cyberbullying. Similarly, low self-esteem and mental health problems, not only in the victim but also for the aggressors and witnesses, are common risk factors for these two manifestations of maltreatment due to abuse of power among peers.

Regarding the protective factors related to cyberbullying situations, it is worth noting access to computers and the Internet and ICT, but consciously and responsibly employed (Peker, 2015). Among the social aspects identified are those related to the perception of online interactions; that is, the low perception of anonymity (Barlett, 2015), the awareness of being observed on the Internet (Çakır, Gezgin, & Ayas, 2016), and the perception of social support (Olenik-Shemesh, & Heiman, 2017); in particular this last aspect is one of the protective factors of various problems during adolescence (Páramo, 2011).

Regarding the protective factors against online harassment related to the family and reported in this systematic review, there is agreement with other empirical studies that find a relationship between a positive family style (Páramo, 2011) and decision-making regarding the responsible use of the Internet, for example, the reduction of online pornography consumption (Rivera, Santos, Cabrera, & Docal, 2016) and the prevention of cyberdependence (Kalaitzaki & Birtchnell, 2014).

At the individual level, low impulsivity, low justification of aggression, resilience, and empathy are the main protective factors, and various protective factors that minimize cyberbullying situations coincide with those identified in other problematic relational forms such as, for example, antisocial disorder (Arango, Montoya, Puerta, & Sánchez, 2014), bullying (Plata, Riveros, & Moreno, 2010) and rule-breaking (González-Arratia, Valdez, van Baneveld, & González, 2012).

Carrying out a systematic review of the existing literature on a particular subject is a critical exercise that can shed light on the current relevance of an issue and the state of research on it. This may be useful for a large number of professionals in healthcare and social sciences, in that it allows them to develop their methodologies and techniques of psychosocial intervention that are based on findings of current and rigorous studies on cyberbullying, in which the greatest possible number of social agents are involved.

Finally, this type of study identifies the main consensus around the issue and offers a starting point for researchers who are faced with an increasing number of publications. On the other hand, it is also true that a systematic review of the bibliography is unlikely to be able to account for everything that has been published on the topic of interest. The present review does not escape this situation. In this sense, methodological decisions imply an inevitable bias in the exercise carried out, although this does not mean it lacks importance. Thus, it may be important for future revisions, beyond choosing publications in English, to look at publications that account for what is happening in different contexts, offering a more complete state of the art, not so much in relation to the existing literature, but to the understanding of the problem in different geographical, social and cultural environments.

CONFLICT OF INTERESTS

There is no conflict of interest.

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