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Effect of a cyberbullying prevention program integrated in the primary education curriculum☆

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ABSTRACT

Most cases of cyberbullying occur in secondary education, which is the stage where many cyberbullying programs are focused. This situation has given rise to the design, implementation and evaluation of a cyberbullying prevention program integrated within the primary education curriculum, based on a needs analysis carried out with 55 teachers and 156 parents. The objective of this study is to evaluate the effect of the program on a sample of 159 students of primary education, following a quasi-experimental pre-post design with two groups, including training for teachers and parents. Significant differences have been obtained in the following dimensions: *emotional self-awareness*, *problem solving*, *responsible use*, *digital teaching tutoring* and *family supervision*. It is concluded that the program is effective, as it develops the personal and technological skills assessed in the students, and has a positive impact on the tutoring and supervision of their teachers and parents.

Efecto de un programa de prevención de ciberacoso insertado en el currículum escolar de Educación Primaria

Palabras clave:
Educación primaria
Ciberacoso
Prevención
Integración curricular
Formación docente y familiar

RESUMEN

El mayor número de casos de ciberacoso sucede en la etapa de Educación Secundaria, donde se centran gran parte de programas que trabajan ciberacoso. Esta situación lleva al diseño, implantación y evaluación de un programa de prevención de ciberacoso integrado en el curriculum escolar de Educación Primaria, partiendo de un análisis de necesidades realizado con 55 docentes y 156 padres y madres. El objetivo del presente estudio es evaluar el efecto del programa en una muestra de 159 estudiantes de Educación Primaria, siguiendo un diseño cuasi-experimental, pre-post con dos grupos, incluyendo formación para docentes, padres y madres. Se han obtenido diferencias significativas en las dimensiones *autoconciencia emocional*, *resolución de problemas*, *uso responsable*, *tutorización digital docente* y *supervisión familiar*. Se concluye que el programa es efectivo, desarrollando en el alumnado las habilidades personales y tecnológicas evaluadas, y repercutiendo positivamente en la tutorización y supervisión de sus docentes y progenitores.

Introduction

The Information and Communication Technologies (ICT) and the Internet are prominent elements in the lives of young people, both within and outside the school setting (International Telecommunication Union, 2017; Lenhart, Smith & Anderson, 2015). Research (Garmendia, Jiménez, Casado, & Mascheroni, 2016; Stald et al. (2014)) on the relationship between youngsters (9–16 years old) and ICT indicates that the average age at which children first have access to the Internet is getting lower, the current age being at around 7 years old. Likewise, children have their first

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mobile phone at around the age of 10 (Golpe, Gómez, Harris, Braña, & Rial, 2017).

The fact that ICT are part of children's and adolescents' daily lives and that they are being used on a daily basis at increasingly early ages (Arnáiz, Cerezo, Giménez, & Maquilón, 2016) has led to growing concerns about the risks involved (Kelly & Arnold, 2016; Nocentini, Zambuto, & Menesini, 2015), with special emphasis on their influence on social and emotional development and psychological well-being (Bogart et al., 2014; Ho, Lwing, & Lee, 2017; Estévez, Jimenez, & Moreno, 2018).

Cyberbullying, understood as referring to bullying between peers via ICT, mainly the Internet and mobile phones (Kowalski, Giumetti, Schroeder, & Lattanner, 2014; Olweus & Limber, 2018), is considered a global phenomenon with high prevalence (Hymel & Swearer, 2015; Sung, 2018). In this regard, studies such as those of Ortega-Barón, Buelga, and Cava (2016) and Sakellariou, Carroll, and Houghton (2012) indicate that there are more cases of cyberbullying in the first years of secondary education, with a decrease in the last years.

From a review of the validated programs used for the prevention and intervention of cyberbullying in primary education, it can be seen that they focus primarily on peer-to-peer bullying, but do not cover ICT-related aspects (Machimbarrena & Garaigordobil, 2018). Such programs include KiVa (Salmivalli, Garandeau, & Veenstra, 2012) or ViSC (Spiel & Strohmeier, 2011), which work on social-emotional skills, communication and coping strategies in order to improve harmonious coexistence at school.

Programs that focus on cyberbullying are mostly aimed at secondary education (Della Cioppa, O'Neil, & Craig, 2015; Yeager, Fong, Lee, & Espelage, 2015). One of the programs that have been effective in reducing the practice of this type of bullying is Cyberprogram 2.0 (Garaigordobil & Martínez-Valderrey, 2014), which is focused on identifying and conceptualizing bullying/cyberbullying and the roles involved, analyzing its consequences, developing coping strategies, and promoting social-emotional development; the ConRed Program (Del Rey, Casas, & Ortega, 2012) designed to empower and increase the educational community's awareness of the need to make safe, positive and beneficial use of the Internet and social networks; and the Media Heroes Program (Schultze-Krumbholz, Zagorscak, Siebenbrock, & Scheithauer, 2012), which promotes media literacy, focusing on the school climate and personal relationships.

A recent meta-analysis of the effectiveness of cyberbullying programs (Gaffney, Farrington, Espelage, & Ttofi, 2019) indicates that implementation of these programs reduces the perpetration and victimization of cyberbullying, and points to a paucity of studies focusing on the effectiveness of these programs.

Bearing in mind the comments mentioned above, it can be seen that there is a need to work on cyberbullying in a preventive way in primary education, through the design, implementation and evaluation of the Program Ëiving in harmony in the real and digital world.

The purpose of primary education is to guarantee the integral training of the student by establishing a series of competences, including digital, that are included within the curriculum (Spanish Royal Decree 126/2014). It is therefore considered important to work on the aspects linked to the prevention of cyberbullying by integrating them into different subjects, so that they are worked on in context in real situations, bringing the reality of society closer to the classroom, and giving the contents a meaning that facilitates understanding and learning (Chaves, Hernández, & León, 2011; Roegiers, 2007).

Likewise, as factors that can offer protection from violent behavior in the virtual environment, we find the family (Cerezo, Sánchez, Ruiz, & Arense, 2015; Chng, Li, Liau, & Khoo, 2015; Kalmus, Blinka, & Ólafsson, 2015) and the school (Castro, 2017; Gázquez, Pérez, & Carrión, 2011), as they promote a greater sense of security and strengthen the emotional connection of young people with their most significant adults. It is therefore considered necessary to include training actions aimed at parents and teachers.

Prior to designing the program, and following the recommendations of Altschuld and Kumar (2010), a needs analysis is carried out with 156 parents and 55 teachers from five public primary schools in the province of Castellón to find out how they approach cyberbullying from the family and educational contexts, and what their needs are in this regard. One point that stands out in this study is that all parents consider it necessary for schools to offer preventive guidance on ICT risks. With respect to teachers, around 80% acknowledge that they have no guidelines to follow when it comes to dealing with situations involving cyberbullying, nor do they have sufficient training to act. Over half of them (57%) state that without the help of other professionals they do not feel capable of resolving conflicts derived from the use of ICT. They consider it necessary to draw up action models and produce materials to work on in the classroom (Bevilacqua et al., 2017; Giménez, Arnaiz, Cerezo, & Prodócimo, 2018).

The aim of this study is to evaluate the effect of the program entitled Ëiving in harmony in the real and digital worldön pupils in the last four years of primary education. The initial hypotheses are: (H1) *emotional self-awareness* competence is expected to be greater in the experimental group than in the control; (H2) *problem-solving* competence is expected to be greater in the experimental group than in the control; (H3) *responsible use* competence is expected to be greater in the experimental group than in the control; (H4) *digital teaching tutoring* dimension is expected to be greater in the experimental group than in the control, and (H5) *family supervision* dimension is expected to be greater in the experimental group than in the control.

Method

Participants

The initial sample consists of 164 subjects. After eliminating 5 cases due to failure to answer some items, the final sample is made up of 159 students from the last four years of primary education: 77 in the experimental group and 82 in the control group. The students come from two public pre-school and primary education schools (C.E.I.P.) in the province of Castellón, 50.3% of them were girls and 49.7% boys, with ages between 8 and 12 years ($M = 9.86$, $SD = 1.28$). The teacher training course is attended by 16 teachers and the educational psychologist from the experimental C.E.I.P., including the four teacher-tutors from the groups in which the program is applied. The training course for parents is attended by 89 parents of the pupils in the experimental group (52 mothers and 37 fathers).

Instruments

In order to evaluate the variables included in the research, two assessment tools have been administered.

Emotional education

The Cuestionario de Educación Emocional (Emotional Education Questionnaire – EEQ) (Álvarez, 2011), originally consisting of 68 items, assesses five dimensions: *emotional self-awareness*, *self-esteem*, *social skills*, *problem-solving* and *life skills*. The EEQ is designed as a Likert-type scale in which the subjects must indicate the extent to which they agree with the statements presented by marking the possible answers (never, sometimes, frequently and always) with a cross. The *emotions* and *problem-solving* dimensions are taken into account in this study. Examples of the items corresponding to the dimensions of the questionnaire are Ẅhen I have

a problem I try to solve itänd Ï feel very bad when others criticize what I do". In relation to reliability, the values obtained in this study in the omega coefficients in the dimensions range from ω = .73 for the *emotion* dimension and ω = .70 for *problem-solving*. The results have shown acceptable values for composite reliability (CR = .85) and average variance extracted (AVE = 53.42%).

Quality of cyberbehavior

The Escala de Evaluación de la Calidad de la Ciberconducta (Cyberbehavior Quality Assessment Scale) (Ortega, Del Rey, & Sánchez, 2012) is a tool designed to analyze youngsters' cyberbehavior. It consists of 30 items, with a Likert scale with five categories of conduct from 0 = never to 4 = always and includes seven dimensions: *responsible use*, *relationships in social networks, digital tutoring, family supervision, dependence, cyberdating* and *safe use*. Some examples of the items in the questionnaire are Ẅhen I publish something about a person, I ask for permission", Ÿ teachers help us to use social networks properlyänd Ÿ parents help me to use social networks properly". In this study, the values of the omega coefficient in the three dimensions are as follows: *responsible use* (ω = .68), *digital teaching tutoring* (ω = .71) and *family supervision* (ω = .72). The results show the acceptable values of composite reliability (CR = .83) and average variance extracted (AVE = 54.22%).

Program design and procedure

The design of the program entitled Ëiving in harmony in the real and digital worldẗakes into account both the necessities detected in the prior needs analysis with teachers and parents, and the elements considered essential for the prevention of situations of violence (Calmaestra et al., 2016; Luengo, 2014; Orjuela, 2013). Its content is focused on:

Personal and social skills

Self-esteem

Self-knowledge, accepting how I am, self-confidence, valuing my qualities, what makes me feel good and bad, taking care of myself.

Empathy

Put yourself in someone else's shoes, listen and pay attention to others, tolerate and help others.

Assertiveness

Say no appropriately, when I must say no, accept a fair complaint, defend and express rights and duties.

Emotional self-control

Recognize our own and other people's emotions, expression of emotions, how we act when we feel a certain way, consequences and regulation of reactions.

Conflict resolution

Forms of group relationship, appropriate and inappropriate attitudes, identify conflict situations and their consequences, styles of communication, how to act in the face of conflict, how and when to make a decision.

Technological skills

Good use of ICT

What ICT have to offer, use and abuse, how to use them responsibly, critical attitude when surfing and sharing information on social networks.

Risks

Identify dangerous situations, what cyberbullying is, what actions are considered cyberbullying, different roles involved, personal and legal consequences, how to protect myself, what to do if I am harassed or harass someone.

The program consists of 15 activities in each academic year (ten personal and social skills activities, and five technological skills activities), 60 activities altogether. These activities are integrated into the curricula of Social Sciences, Natural Science and Spanish Language and Literature (subjects chosen because of the match between their contents and those of the program). Each activity is designed to last approximately 15–20 minutes and uses different methodologies such as individual work, brainstorming, case studies or guided discussion.

The program consists of a paper dossier for the students with the activity cards (this document is available in the classroom, and the teacher-tutor tells them when to use it), and a dossier for the teacher, where, for each activity, details are given about the subject in which it is included, both curricular contents and those specific to the dimension to be worked on, methodology, procedure, timeframe, guidelines for carrying it out, and materials required. In this way, the teacher knows when to perform each activity, and has all the necessary information to be able to carry them out.

An example for the development of technological skills (6th year) is the activity "Así sí" (That is it), integrated in Spanish Language and Literature. Its curricular aims are to favor discussions among pupils on school/social topics, and it is also intended to encourage them to write advertising texts, as well as to analyze and identify situations in which the use of ICT can be dangerous and to familiarize them with guidelines on avoidance. To this end, based on the pupils' ideas about what they think cyberbullying is, the concept is constructed and actions are established that make it possible to prevent it. After going over the characteristics of a good slogan, the pupils work in small groups to write a slogan for a prevention campaign. Finally, each group shares its slogan with the rest of the class.

This program includes a teacher training course, given by the researchers, consisting of three sessions each lasting two hours. The contents of each session are: 1st session: young people's use of ICT and risk behaviors; cyberbullying (definition, types of roles and consequences) and other ICT risks; 2nd session: the most frequent manifestations in young people allowing their detection; risk indicators; aspects to work on with the students to foster prevention; 3rd session: what to do in a case of cyberbullying. The sessions are built upon a theoretical-practical methodology, which allows participants to know the concepts and tools, and to discuss their role as teachers in the classroom and analyze possible actions and measures.

The training course for families, given by the researchers, also consists of three 2-hour sessions. The contents of each session are: 1st session: young people's use of ICT, benefits of ICT, misuse of ICT and their potential risks, cyberbullying (definition, roles and types of bullying); 2nd session: how to prevent cyberbullying from home, tools for parental control, criminal liability of the child; 3rd session: behavioral symptoms to detect whether my son or daughter may be involved in a case of cyberbullying, what to do if he or she is involved in a case of cyberbullying, tools and resources to learn more. The sessions have a first explanatory part delivered by the researchers, and the last half hour is dedicated to a group discussion.

The study with the students is based on a quasi-experimental pre-post research design with two groups, one of which was quasi-control (Montero & León, 2007). For Trochim (2005), this is probably one of the most used designs in social research. Ramos (2011) points out that this type of design loses internal validity with respect to experimental designs, but gains in external validity.

Table 1
Pre-test and post-test analyses of the different constructs in the experimental and control groups

	Pre-test				Post-test				Pre-test Anova		Post-test Ancova	
	Exp.		Control		Exp.		Control					
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*F* (1,157)	*d*	*F* (1,156)	*d*
Responsible use	2.58	.51	2.59	.48	3.10	.47	2.92	.45	0.17	0.02	5.52*	0.39
Tutoring	2.96	.46	2.84	.44	3.12	.45	2.89	.54	2.82	0.26	5.42*	0.46
Supervision	2.79	.45	2.64	.50	3.17	.39	2.92	.44	3.95	0.29	12.0*	0.60
Problem-solving	2.86	.60	2.70	.56	3.09	.48	2.84	.58	2.76	0.27	5.42*	0.47
Self-awareness	3.07	.28	2.99	.28	3.20	.27	2.94	.39	3.28	0.28	6.43*	0.83

* $p < .05$.

Table 2
Characteristics of the sample according to age

Characteristics	Total sample ($n = 159$)		Experimental ($n = 77$)		Control ($n = 82$)		Statistic
	M	*SD*	*M*	*SD*	*M*	*SD*	
Age	9.86	1.28	9.79	1.25	9.93	1.30	$t(157) = -0.68$

Note. Mean (*M*) and standard deviation (*SD*).

The experimental centers are chosen at random from a list of all the centers in the province of Castellón. Subsequently, the control group is chosen according to the similarity with the experimental group in terms of the socio-demographic characteristics of the students.

After applying for and obtaining permission to carry out the research from the Department of Education, Research, Culture and Sport of the Valencian Regional Government, this fact is communicated to the management of the experimental and control center, who inform the Teaching Staff, the School Board and the Parents' Association about the study. Once authorization has been obtained, the participating students are given an informed consent document to be signed by their parents. The research takes into account the ethical values established by the Code of Ethics of the General Council of Official Colleges of Psychologists.

Before implementing the program, the researchers hold a meeting with the teacher-tutors of the experimental group who have to implement the program in their classrooms in order to explain the program and to provide them with materials. Likewise, the researchers carry out the first administration of the assessment tools to the students, both from the experimental center and from the control center, in a tutorial session with the support of the teacher-tutors, paying special attention to the fact that the students complete all the items.

Then, at the experimental centre, the researchers conduct the teacher training course. The dates are arranged with the school management, which summons all the teaching staff of the center because they consider their training in this field to be relevant.

Once finished, the parents of the students in the experimental group are summoned by means of a circular that is distributed to the students. The circular explains the objective of the course, contents, dates and encourages them to register by stating their details on the circular and returning it to the teacher-tutor. Both courses take place in the center's facilities.

The program with the students is implemented throughout an academic year. While it is being applied, the researchers meet weekly with the teacher-tutors of the experimental center to analyze how correctly the program is being applied in their classrooms. Once the implementation of the program in the experimental center is finished, the second administration of the assessment tools takes place in the experimental and control centers.

Data analysis

Data is analyzed with the statistical software *Analysis of Moment Structures* (AMOS) and with the *Statistic Package for the Social Sciences* (SPSS), both in their version 25. With the AMOS, the Confirmatory Factor Analysis (CFA) is carried out with the method of maximum likelihood, Composite Reliability (CR) and Average Variance Extracted (AVE); subsequently, the omega coefficient is calculated using the McDonald formula (1999), with the factor loadings obtained in the CFA. The SPSS is used to calculate the normality and homogeneity of the data, as well as the analysis of variances and covariances.

The assumptions of normality and homogeneity in the data are tested by means of the Kolmogorov–Smirnov and Levene tests, respectively. The results indicate that it cannot be said that the differences found between the variances of the compared groups or the normality of the data are significant. First, a comparison of groups is carried out through a comparative study within an associative strategy (Ato, López-García, & Benavente, 2013). T-tests and chi-square were conducted on the characteristics of the experimental and control groups in the pre-test phase. Second, variance analyses (ANOVAs) are performed on the scores of the different variables evaluated in the pupils between the experimental and control groups in the pre-test phase, as well as t-tests for related samples in the experimental and control groups. Third, to provide evidence of the effect of the program, descriptive and covariance analyses of the post-test scores (ANCOVAs, covarying the pre-test) are carried out. In addition, the effect size is calculated by means of Cohen's *d* statistic (Cohen, 1992), taking into account the approximate values indicated by the author (small < 0.50; moderate 0.50–0.79; large ≥ 0.80) (see Table 1).

Results

Differences between the experimental and control groups are analyzed in terms of the variables age, sex and use of the social platforms Facebook, Tuenti, Twitter, Instagram, Whatsapp, Snapchat and Hangouts (see Tables 2 and 3). No significant differences were observed between the mean ages of the two groups or with respect to sex. With regard to the use of social platforms (SP), the low percentage of use of Facebook, Tuenti, Twitter, Instagram, Snapchat and Hangouts should be highlighted, whereas a high percentage was detected for Whatsapp (79.1%). Significant differences are only found between the experimental and control groups in the use of

Table 3
Characteristics of the sample according to sex

Characteristics	Total sample ($n = 159$)		Experimental ($n = 77$)		Control ($n = 82$)		Statistic		
	F	%	*F*	%	*F*	%			
Sex									
Female	80	50.3	42	54.4	38	46.3	χ^2 (1)	=	1.07
Use of SP (Yes)									
Facebook	36	22.6	13	16.9	23	28.0	χ^2 (1)	=	2.83
Tuenti	5	3.1	2	2.6	3	3.7	χ^2 (1)	=	0.15
Twitter	12	7.5	6	7.8	6	7.3	χ^2 (1)	=	0.13
Instagram	51	32.1	22	28.6	29	35.4	χ^2 (1)	=	0.84
Whatsapp	125	79.1	51	67.1	74	90.2	χ^2 (1)	=	12.78***
Snapchat	24	15.1	17	22.1	7	8.5	χ^2 (1)	=	5.68*
Hangouts	4	2.5	4	5.2	0	0	χ^2 (1)	=	4.37*

Note. Frequency (F) and the percentage (%).
* $p < .05$.
*** $p < .001$.

Whatsapp $\chi^2(1) = 12.78$, $p < .001$, Snapchat $\chi^2(1) = 5.68$, $p < .05$, and Hangouts $\chi^2(1) = 4.370$, $p < .05$.

In order to verify the existence of statistically significant differences between pre-test and post-test, Student's *t* tests are performed for related samples in both the experimental and the control groups. In the experimental group there are differences between the pre-test and the post-test on *emotional self-awareness* ($t = -3.102$, $p < .01$), problem-solving ($t = -2.183$, $p < .01$), *responsible use* ($t = -7.462$, $p < .001$), *digital teaching tutoring* ($t = -2.724$, $p < .05$) and *family supervision* ($t = -4.082$, $p < .001$); in all cases higher scores were obtained in the post-test. With regard to the control group, no differences are found for *emotional self-awareness* ($t = -0.135$, $p > .05$), *responsible use* ($t = -0.120$, $p > .05$), *digital teaching tutoring* ($t = -1.562$, $p > .05$) or *family supervision* ($t = -0.182$, $p > .05$). Statistically significant differences are found for *problem-solving* ($t = -2.18$, $p < .01$), which may lead one to think of the possible effect of an uncontrolled foreign variable.

Finally, in order to verify the effect of the prevention program in the experimental and control groups after the implementation of the program, covariance analyses of the post-test scores are performed in the constructs under study, covarying the pre-test; the results (see Table 1) provide evidence of the effect of the impact of the program. The effect of *emotional self-awareness* is large, whereas the effect of the program on *family supervision* can be considered moderate. All other values are considered small.

Discussion

With regard to the characteristics of the sample, attention should be drawn to the low frequency of use of certain social platforms (Facebook, Tuenti, Twitter, Instagram, Snapchat and Hangouts), which reflects the fact that this is the stage when students are beginning to use them. It is therefore considered important to train them both in the use of the Internet and social networks, and in the development of personal and social skills that play an essential role in interpersonal relations.

In this respect, a striking detail is the high percentage of use of Whatsapp in both groups, possibly linked to the lowering of the age at which youngsters have their first mobile phone (Golpe et al., 2017). In addition, the fact that the use of mobile technology largely explains young people's inappropriate in the use of ICT (Cha & Seo, 2018; Malo, Martín, & Viñas, 2018) supports the idea of working on cyberbullying preventively in primary education.

The data reveal significant differences in the experimental group for *emotional self-awareness* and *problem-solving*, before and after implementation of the program, and so it can be concluded that pupils have developed both dimensions during their participation in the program. This is a good point, since cyberbullying is considered a social and emotional risk factor associated with psychological problems (Gómez, Romera, & Ortega, 2017; Moreno, Estévez, Murgui, & Musitu, 2009). With respect to the differences in the experimental group, before and after the application of the program, in *responsible use*, results show that knowledge of what making good use of ICT means and how to do it, as well as knowing the risks to which they are exposed, has made students reflect on their use of ICT. This would be in line with Rohatgi, Scherer, and Hatlevik (2016), who establish a clear relationship between the use of ICT, self-efficacy and digital training.

The differences found in the dimensions of *digital teaching tutoring* and *family supervision* indicate that specific training courses aimed at teachers and parents have had a positive impact. These results are in line with those of studies that stress the importance of the family (OfCom, 2016) and school as protective factors against cyberbullying (Blau & Shamir-Inbal, 2017; Ortega-Barón et al., 2016).

These differences between the experimental group and the control group, in all competences and dimensions, observed at the end of the program lead us to conclude that the program Ïliving in harmony in the real and digital worldïhas been effective as a means to provide training on the use and risks of ICT. Furthermore, it has also fostered the development of skills directly linked to the prevention of this type of bullying, thus fulfilling the hypotheses of our study.

These results are important because, as Cerezo and Rubio (2017) point out after a review of measures related to school bullying and cyberbullying, the protocols dealing with prevention, detection and action or intervention do not extend to all the Spanish Communities. This inequality highlights the lack of educational responses to these situations.

Likewise, the role of parents and teachers is fundamental in helping youngsters to avoid and control the risks that exist on the Internet (Castro, 2017; Hiniker, Schoenebeck, & Kientz, 2016). Accordingly, specific training for these groups is considered essential. In this regard, as previously noted by Romera, Cano, García, y Ortega (2016) and Giménez et al. (2018), it is important to stress the role of educational psychologists (counselors) in working with students on prevention and in the training of teachers and parents. Recognition is also due to them for their work in detecting conditions that hinder the pupils' teaching-learning process and their adaptation to the school environment, their support and counseling for schools, and the coordination of educational and social and family guidance activities.

Among the limitations of the study, there is clearly a lack of instruments for cyberbehavior assessment adapted to the primary education stage. They should also be better adapted to students' use and knowledge of the Internet and social networks. The study

sample needs to be extended with primary education pupils from different parts of Spain. Likewise, the implementation and assessment of the program has been carried out in one school year, although a longitudinal evaluation is considered necessary in order to have more detailed knowledge of the effectiveness of the program and to be able to determine whether the students, after completing the first years of secondary education, present fewer cases of cyberbullying in comparison with other schools where the program has not been carried out.

In spite of these limitations, our work allows us to conclude that primary school pupils already use the Internet and some social networks and instant messaging apps without having received any training in their use and without being aware of the risks to which they are exposed. In addition, bearing in mind that the first years of secondary education is the period in which a greater number of cases of cyberbullying appear, primary education is therefore seen as the ideal time to work on this problem at a preventive level. Yet, no preventive schemes for this type of bullying have been found in the literature for this stage of education and it is therefore essential to design programs, such as the one presented here, that are suited to the age of these pupils. In addition, our program is innovative in its curricular integration methodology, which allows this problem of society to be approached in the classroom, from different specific visions of each subject, thereby making its learning more significant, and contributing to the integral development of students. Similarly, the results confirm the influence of teachers and parents, and so it is considered essential to include their participation and training in cyberbullying prevention programs.

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