

Effect of Cyberprogram 2.0 on Reducing Victimization and Improving Social Competence in Adolescence

Maite Garaigordobil and Vanesa Martínez-Valderrey

University of the Basque Country

Abstract

The main purpose of the study was to assess experimentally the effects of an antibullying program (*Cyberprogram 2.0*) on behaviors of victimization due to “face-to-face” bullying and on diverse social behaviors. The sample comprised 176 adolescents, aged 13-15 years, grouped into 93 experimental subjects and 83 control subjects. The study used a repeated measures pretest-posttest design with a control group. Before and after the program (19 sessions), two assessment instruments were administered. ANCOVAs posttest confirmed that the program stimulated a significant decrease in victimization and an increase of positive social behaviors (social conformity, help-collaboration, self-assurance-firmness, prosocial leadership). The intervention significantly decreased some negative social behaviors to a greater extent in females, although in the remaining variables, the change was similar both sexes. The discussion focuses on the importance of implementing programs to promote socio-emotional development and prevent violence.

Keywords: Bullying, cyberbullying, adolescence, social behavior, gender.

Resumen

El estudio tuvo como principal objetivo evaluar experimentalmente los efectos de un programa antibullying (*Cyberprogram 2.0*) en conductas de victimización por bullying “cara-a-cara” y en diversas conductas sociales. Se utilizó una muestra de 176 adolescentes, de 13 a 15 años, 93 experimentales y 83 de control. El estudio utilizó un diseño de medidas repetidas pretest-posttest con grupo de control. Antes y después del programa (19 sesiones) se administraron dos instrumentos de evaluación. Los ANCOVAs posttest confirmaron que el programa estimuló una disminución significativa de la victimización y un aumento de las conductas sociales positivas (conformidad social, ayuda-colaboración, seguridad-firmeza, liderazgo prosocial). La intervención disminuyó significativamente más algunas conductas sociales negativas de las mujeres, aunque en el resto de las variables el cambio fue similar en ambos sexos. La discusión se centra en la importancia de implementar programas para fomentar el desarrollo socioemocional y prevenir la violencia.

Palabras clave: Bullying, ciberbullying, adolescencia, conducta social, género.

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Correspondence concerning this article should be addressed to Maite Garaigordobil. Departamento de Personalidad, Evaluación y Tratamiento Psicológico. Facultad de Psicología. Universidad del País Vasco Avda. de Tolosa, 70. 20018. San Sebastián, España. E-mail: maite.garaigordobil@ehu.es

Introduction

This study is based on current concern about peer violence. Bullying is a specific form of school violence, where one or more aggressors with more power repeatedly harass and submit a classmate with the intention of causing harm (Álvarez-García, Núñez, Rodríguez, Álvarez, & Dobarro, 2011; Avilés, 2002; Cerezo, 2009; Olweus, 1999; Ortega & Mora-Merchán, 2008; Piñuel & Oñate, 2006). Four traditional forms of presential or «face-to-face» bullying are distinguished: physical (aggressive behavior targeting the body or property), verbal (disparaging verbal behavior), social (behaviors of isolation and marginalization), and psychological (behaviors to decrease self-esteem and generate fear).

Other forms of bullying are currently emerging, such as cyberbullying, which consists of using information and communication technologies—mainly Internet and mobile phones—to bully classmates (Garaigordobil, 2011a, 2011b; Garaigordobil & Oñederra, 2010). According to Smith et al. (2008), cyberbullying is a frequently repeated aggressive and intentional behavior, using electronic devices, aimed at a victim who cannot easily defend him- or herself. Various means are used for cybernetic bullying: texting (mobile SMS), telephone bullying (anonymous calls to the mobile, etc.), recordings of acts of physical aggression or humiliation

that are diffused by mobile phone or Internet, bullying by means of photographs and videos diffused by mobile or uploaded to YouTube, e-mails, social networks, websites, etc.

Within the context of the debate on whether cyberbullying is a type of bullying or a different entity (Casas, Del Rey, & Ortega, 2013; Cerezo, 2012; Tokunaga, 2010), in this study, cyberbullying is considered as a new form of bullying, a specific type of bullying, but with novel features associated with the new technological means. Cyberbullying is like bullying in that it is a premeditated, intentional, and repetitive violent behavior, based on an asymmetric relationship of power-submission with another person. Nevertheless, cyberbullying presents some peculiarities that differentiate it from other forms of presential bullying, for example, the victims cannot escape (because they are constantly receiving messages on their mobile or computer), the amplitude of the audience (it reaches an infinite number of people), the invisibility of the bullies, the duration (the harassment content can be imperishable), as well as the rapidity and ease with which it is carried out (Garaigordobil, 2013).

In recent years, efficacious anti-bullying programs have been developed that have promoted a decrease of victimization behaviors (Fekkes, Pijpers, & Verloove-Vanhorick, 2006; Gini, 2004; Gollwitzer, Eisenbach, Atria,

Strohmeier, & Banse, 2006; Kärnä et al., 20011; Minton & O'Moore, 2008; Olweus, 2004; Ortega, 1997; Ortega & del Rey, 2001; Ortega, del Rey, & Mora-Merchán, 2004; Palladino, Nocentini, & Mene-sini, 2012; Sapouna et al., 2010; Williford et al., 2012), an increase of prosocial (Gini, 2004; Grossman et al., 1997) and help behaviors for the victims (O'Moore & Minton, 2004), an improvement of social competence (Leadbetter, Hoglund, & Woods, 2003), as well as a decrease of fights (Heydenberk, Heydenberk, & Tzenova, 2006) and aggressiveness (Grossman et al., 1997; Orpinas, Horne, & Staniszeski, 2003; Ortega & Lera, 2000). Nevertheless, in spite of the great social relevance that cyberbullying is acquiring, the review of the literature shows that currently, there are very few intervention programs aimed at prevention and reduction of psychoeducational cyberbullying that have been validated. The review carried out only allowed us to identify two experimentally assessed programs: The *Brief Internet Cyberbullying Prevention Program* (Doane, 2011) and the *ConRed Program* "Conocer, construir, convivir en Internet y las redes sociales" [Know, build, and coexist in Internet and the social networks] (del Rey, Casas, & Ortega, 2012). However, although few studies have analyzed gender differences in the effects of anti-bullying interventions, they have confirmed

that females increase their help behaviors more than males (Andreou, Didaskalou, & Vlachou, 2007).

Peer violence has harmful consequences for all concerned, but with different symptoms and degrees of suffering. Although the most pronounced effects are observed in the victim, aggressors and observers are also the recipients of learnings and negative habits that will affect their current and future behavior. All people involved in situations of maltreatment—in any of the roles—are at greater risk of suffering from psychosocial maladjustment and psychopathological disorders in adolescence and adulthood. The considerable prevalence of cyberbullying and its noxious effects on all those concerned reveals the need for programs to prevent and/or reduce this type of violence (Cava, Buelga, Musitu, & Murgui, 2010; Garaigordobil, 2011c; Garaigordobil & Oñederra, 2010; Rodríguez-Hidalgo, Ortega-Ruiz, & Zych, 2014).

The program assessed in this study, *Cyberprogram 2.0* (Garaigordobil & Martínez-Valderrey, 2014), is made up of activities that have the aim of preventing and/or intervening in situations of presential and electronic bullying. The intervention consisted of 19 one-hour sessions carried out during the school term. The activities that make up the program have four main goals: (1) identify and conceptualize bullying/cyberbullying, and the three roles involved in this

phenomenon; (2) analyze the consequences of bullying/cyberbullying for victims, aggressors, and observers, promoting critical capacity and the capacity to denounce such actions when they are discovered; (3) develop coping strategies to prevent bullying/cyberbullying behaviors; and (4) other transversal goals such as developing positive variables (empathy, active listening, social skills, strategies to control anger-impulsivity, constructive conflict resolution, tolerance to accept a diversity of opinions, etc.). Diverse sources were reviewed and used to design the activities (Cerezo, Calvo, & Sánchez, 2011; Cowie & Colliety, 2010; Garaigordobil, 2000, 2011b; Viejo, del Rey, Maldonado, & Mora-Merchán, 2010).

The application of the program to a group implies four constant variables that make up the methodological framework of the intervention. Inter-session constancy, which implies performing a weekly one-hour session. Spatial-temporal constancy, because the program is applied on the same week day, at the same time, and in the same physical space, a large room, free of obstacles (gymnasium, etc.). The constancy of the adult who directs the program, an adult with psychopedagogical training, and finally, the constancy in the session structure. The sessions begin with the group members sitting in a circle on the floor. The adult explains the activity, its goals, etc., and the participants

carry out the action. Subsequently, there is a discussion and guided reflection phase, led by the adult. The adult promotes critical reflection by means of questions. The program uses diverse techniques of group dynamics to stimulate the development of the activity and the debate: role-playing, brainstorming, case study, guided discussion by means of formulating questions, etc.

As an example, activity 15, "Break the law of silence." This activity has the following goals, which are to: (1) break the law of silence, promoting involvement and the filing of a complaint by observers; (2) foster empathy towards the victims; (3) identify positive coping strategies in bullying situations; (4) become aware of the consequences of behavior in virtual spaces; and (5) promote the capacity of cooperation and emotional expression by means of dramatization. To develop the activity, the students watch the first part of a video entitled "*Story of a cyberbullied adolescent*" (<http://www.youtube.com/watch?v=9bgdOuBn4Q4>), in which Joe files a complaint about the bullying he is suffering. Subsequently, the adult asks the adolescents which steps they, as observers, would have taken if Joe were from their environment. The group, distributed in teams of five participants, should write the end of the story, presenting strategies to resolve the problem as observers. For this purpose, each team records the responses that are offered about the proposed prob-

lem. After making a list of the coping strategies, each team should select the response they consider the most adequate for the observers and they subsequently dramatize it, representing the team's most positive and constructive way to solve the problem. After the representations, the whole group again sits on the floor in a circle, and the conclusions of each team are discussed and a debate unfolds, analyzing the different ends of the story provided by the teams, and the most positive action strategies carried out by the observers. In this debate phase, the adult poses questions to stimulate reflection, for example: "Which would be the most efficient strategies for the observers to deal with cyberbullying?" "What should the observers do?" "What can be the reasons for observers' silence?" "How does a person feel if he or she is being bullied and sees that the others do nothing to help?"

Within this contextualization, the study had the main goal of experimentally assessing the effects of a program to prevent and reduce peer bullying (Cyberprogram 2.0) on the behaviors of presential bullying victimization and on diverse positive and negative social behaviors (help-cooperation, aggressive behavior, etc.). With regard to this goal, two hypotheses are proposed: H1. The intervention will decrease presential bullying behaviors (physical, verbal, social, psychological); and H2) The program will increase positive social behav-

iors (social conformity, help-collaboration, self-assurance-firmness, prosocial leadership) and decrease negative behaviors (aggressiveness-stubbornness, dominance, apathy-withdrawal, social anxiety). In addition, the study analyzes whether the impact of the program was differential for males and females, postulating a third hypothesis: H3. Females' improvement will be higher than that of the males.

Method

Participants

This study was carried out with a sample of 176 adolescents, aged between 13 and 15 years, who studied Compulsory Secondary Education (3rd and 4th). Out of the total sample, 93 (52.8%) were assigned the experimental condition and 83 (47.2%) to the control condition. Regarding distribution by sex, 77 (43.8%) were males and 99 (56.3%) were females. No significant differences as a function of sex were found between experimental and control groups, $\chi^2 = 0.26$, $p > .05$. Of the sample, 25% were 13 years old, 48.9% were 14, and 26.1% were 15. Although the initial sample was made up of 178 adolescents, due to experimental death of two of them, the final sample was made up of 176. The sample was recruited from three schools. In two of the schools, two classrooms were randomly assigned to the experimental

condition, and one classroom to the control condition, while in the third school, one classroom was assigned to the experimental condition, and two classrooms to the control condition. The study was carried out in schools of Gipuzkoa of diverse socio-economic-cultural level. Of the students, 44.3% attended public-secular schools and 55.7% a private-religious center. A random sampling technique was used to select the sample, taking into account the list of schools in Gipuzkoa and the type of center (public-private).

Design and procedure

The study used a quasi-experimental design with repeated pretest-posttest measures and a control group. The intervention program was the independent variable, and the dependent variables were: presential bullying victimization and positive and negative social behaviors. With regard to the procedure, first, a letter was sent to the directors of the randomly selected schools from the list of centers of Gipuzkoa, explaining the project and requesting their collaboration. Those who consented to collaborate were interviewed in order to present the project and give them the informed consent forms for the participants' parents. If the center director decided not to collaborate, the procedure was repeated with the next center on the list, taking into account the network (private-public) and/or the socio-economic-cultural

level of the center that would not participate.

After receiving the parents' consent, a pretest of two assessment instruments was applied to the participants assigned to the experimental and control conditions. Subsequently, the intervention program was implemented in the 5 experimental groups (19 one-hour sessions), while the 4 control groups received the tutorship program of their centers. After the intervention, the same instruments as at pretest were again administered to the experimental and control groups, as posttest measures. The study respected the ethical values required in research with humans (informed consent and the right to the information, protection of personal data and guarantees of confidentiality, non-discrimination, gratuity, and the possibility to leave the study at any phase), and received the favorable report of the Ethics Committee of the University of the Basque Country (CEISH/112/2012).

Assessment instruments

In order to measure the variables of interest in this study, two assessment instruments with psychometric guarantees of reliability and validity were used.

To assess behaviors of presential bullying victimization was used the "Cuestionario Acoso y Violencia Escolar" [Bullying and School Violence Questionnaire] (AVE; Piñuel & Oñate, 2006). It provides

a global bullying index (frequency of different harassment behaviors). This dimension is made up of 50 items, and adolescents report the frequency with which the situations described in the statements occur to them (*never, sometimes, very frequently*). The statements refer to bullying behaviors, intimidation, threats to integrity, coercion, blocking or social exclusion, and direct aggressive behaviors, either physical or psychological. For example, "They steal my things," "They break my things on purpose," "They laugh at me," "They threaten me with weapons," "They don't let me participate, they exclude me," "They shake or push me to intimidate me." The internal consistency (Cronbach's alpha) obtained with the standardization sample was high ($\alpha = .95$). To calculate the composite reliability (CR) and the average variance extracted (AVE), confirmatory factor analysis was carried out on the data of the study, using the maximum likelihood method to estimate the parameters. The results showed that reliability was high (CR = .93), and the average variance extracted was higher than .50 (AVE = 58.59%), implying that a high percentage of the variance is explained by the construct.

To assess social competence was applied the "Actitudes y Estrategias Cognitivas Sociales" questionnaire [Attitudes and Social Cognitive Strategies Questionnaire] (AECS; Moraleda, González, & García-Gallo, 2004). This measures vari-

ous social behaviors: CON: Social conformity (conformity to what is socially correct); H-COL: Help-collaboration (tendency to share with others, to reinforce them to collaborate at work); SF: Self-assurance-firmness (confidence in one's own possibilities to achieve the goals of an interaction, firmness in the defense of one's rights); P-L: Prosocial leadership (tendency to propose ideas to the group, to unite the members around common goals); AGR: Aggressiveness-stubbornness (tendency to violent expressions against people or things, to threats and intimidation); DOM: Dominance (tendency to dominate and manipulate others to achieve benefits); AP: Apathy-withdrawal (lack of interest in groups or in participating in their activities, tendency to be reserved, isolated); ANS: Social anxiety (tendency towards shyness, fear to express oneself and to relate to others). Adolescents rate their degree of agreement with the contents of the phrase on a 7-point Likert scale. For example, "I respect my classmates' things and try not to spoil them," "I like to be generous with others and lend them my things if they need them," "I am rather shy and submissive," "I think the most important thing in life is to gain power in any way and to order other people about." The scales of the original study offered the following consistency indexes (Cronbach's alpha): CON $\alpha = .59$; H-COL $\alpha = .70$; SF $\alpha = .62$; P-L $\alpha = .61$; AGR $\alpha = .66$; DOM $\alpha = .54$; AP $\alpha = .57$; ANS

$\alpha = .62$. With regard to the composite reliability and average variance extracted obtained with the data of the study, the results of the confirmatory factor analysis with the maximum likelihood method for the total scale indicate a high level of reliability ($FC = .98$), and an adequate level of average variance extracted ($AVE = 46.69\%$).

Results

Effects of the program on behaviors of presential bullying victimization and positive and negative social behaviors

To assess the effect of the program, we conducted descriptive analyses (means and standard deviations) and variance of analyses (ANOVAs) with the adolescents' pretest scores on the AVE and the AECS in the experimental and control conditions. All the data analyses were carried out with the statistical package SPSS 19.0 (IBM Corp., 2010). Secondly, we performed descriptive and covariance analyses with the posttest scores (posttest ANCOVA with pretest as covariate), which allows verifying the impact of the program. In addition, we calculated the effect size (Cohen's d : small $< .50$, moderate $.50-.79$, large $\geq .80$). The results can be seen in Table 1.

As can be observed Table 1, in victimization (AVE), the results of the pretest ANOVA did not yield

statistically significant differences between the experimental and control groups before the intervention. However, the posttest ANCOVAs revealed a decrease of face-to-face bullying victimization in the experimental adolescents ($M = -3.16$), versus an increase of these behaviors in the control participants ($M = 2.41$). The effect size was moderate ($d = .60$).

With regard to social competence, first, we performed a MANOVA with the pretest scores in AECS. The results of the pretest MANOVA for the set of social behaviors assessed did not reveal statistically significant differences between the experimental and control conditions at pretest, Wilks' Lambda, $\Lambda = .957$, $F(8, 163) = .91$, $p > .05$, and the effect size was low ($\eta^2 = .043$, $r = .20$). The results of the univariate analysis of variance at pretest (see Table 1) indicated that, before the intervention, there were no statistically significant differences between the adolescents in the experimental and control conditions in any of the social behaviors assessed. The effect size was small for all the variables.

With regard to the change in social competence (AECS), the results of the MANCOVA carried out with the posttest scores for the set of social behaviors assessed revealed statistically significant posttest differences between the adolescents who had carried out the Cyberprogram 2.0 versus the condition control, Wilks' Lambda, $\Lambda = .847$,

Table 1
Pretest and Posttest Analysis of Victimization and Social Behavior in the Experimental and Control Groups

	Pretest		Posttest				ANOVA Pretest		ANOVA Posttest					
	Experimental		Control		Experimental		Control		F (1, 174)	d	P	d		
	M	SD	M	SD	M	SD	M	SD						
Bullying victimization	4.84	6.98	3.67	5.15	1.68	2.64	6.08	9.97	1.55	>.05	.19	19.50	.000	.60
Social conformity	39.56	11.48	40.24	10.74	46.38	10.95	39.43	11.88	0.16	>.05	.06	17.16	.000	.60
Help-collaboration	49.99	12.46	50.50	11.02	52.85	11.59	48.54	12.70	0.08	>.05	.04	8.38	.004	.35
Self-assurance-firmness	52.98	12.18	52.76	10.42	55.82	11.11	48.85	13.14	0.01	>.05	.01	13.46	.000	.57
Prosocial leadership	17.30	5.91	17.60	5.62	17.86	5.63	16.21	6.39	0.11	>.05	.05	4.06	.045	.27
Aggressiveness-stubbornness	25.12	8.72	24.18	11.27	22.47	9.08	22.13	8.25	0.37	>.05	.09	0.00	>.05	.03
Dominance	12.77	8.48	13.17	8.28	11.42	7.68	11.65	6.19	0.10	>.05	.04	0.00	>.05	.03
Apathy-withdrawal	23.10	9.73	23.06	8.78	20.14	9.07	22.15	8.28	0.00	>.05	.00	3.12	>.05	.23
Social anxiety	16.53	8.82	19.17	9.12	15.88	9.13	18.41	8.73	3.71	>.05	.29	1.47	>.05	.28

Note. d = Cohen's effect size. Experimental n = 93, Control n = 83.

Table 2
Pretest and Posttest Analysis of Victimization and Social Behavior in Males and Females

	Pretest		Posttest				Pretest ANOVA		ANOVA Posttest					
	Males		Females		Males		Females		F (1, 91)	d	P	d		
	M	SD	M	SD	M	SD	M	SD						
Bullying victimization	3.87	5.17	5.54	8.02	1.95	3.12	1.48	2.23	1.29	>.05	.24	1.81	>.05	.17
Social conformity	37.73	13.25	40.83	10.00	45.73	11.48	46.73	10.65	1.59	>.05	.26	0.07	>.05	.09
Help-collaboration	46.59	14.10	52.36	10.68	51.11	12.09	54.60	10.74	4.86	.030	.46	1.13	>.05	.30
Self-assurance-firmness	51.38	13.18	54.09	11.42	55.27	11.80	56.44	10.63	1.08	>.05	.21	0.60	>.05	.10
Prosocial leadership	17.84	6.47	16.92	5.51	18.24	5.96	17.50	5.51	0.51	>.05	.15	0.01	>.05	.12
Aggressiveness-stubbornness	27.70	8.21	23.32	8.69	25.86	9.81	19.88	7.81	5.79	.018	.51	5.69	.019	.67
Dominance	15.97	9.12	10.53	7.29	16.14	9.22	7.87	3.14	9.86	.002	.65	19.60	.000	1.20
Apathy-withdrawal	26.35	9.56	20.83	9.28	23.65	8.24	17.35	8.80	7.51	.007	.58	6.26	.014	.73
Social anxiety	17.14	8.55	16.11	9.07	16.49	8.74	15.19	9.40	0.29	>.05	.11	1.48	>.05	.14

Note. d = Cohen's effect size. Males n = 39, females n = 54.

$F(8, 161) = 3.45, p < .05$, with a small effect size ($\eta^2 = .153, r = .39$). The results of the posttest ANCOVAs (with the pretest differences as covariate) on the target social behaviors in the experimental and control conditions (see Table 1) confirmed statistically significant differences in the behaviors of social conformity, help-collaboration, self-assurance-firmness, and prosocial leadership. A significant increase was observed in the experimental adolescents in these four types of positive social behavior (COM = 6.82, H-COL = 2.86, SF = 2.84, P-L = 0.56) versus the control group, in which all these behaviors decreased (COM = -0.81, H-COL = -1.96, SF = -3.91, P-L = -1.39). The effect size was moderate in social conformity and self-assurance-firmness, and small in help-collaboration and prosocial leadership.

Effects of the program on both sexes

To assess whether the change exerted by the program was similar in both sexes, we performed ANOVAs with the pretest scores, and subsequently ANCOVAs with the posttest scores (with the pretest scores as covariate) on the target variables of the study in experimental males and females. The results can be seen in Table 2.

With regard to behaviors of presential bullying victimization (AVE), the results of the pretest

ANOVA (see Table 2) confirmed that there were no differences between experimental males and females before the intervention. The results of the posttest ANCOVA showed that the change stimulated by the program was similar for both sexes.

With regard to social competence, the results of the pretest MANOVA on all the social behaviors assessed with the AECS showed significant differences between males and females before the intervention, Wilks' Lambda, $\Lambda = .804, F(8, 81) = 2.46, p < .05$, with a moderate effect size ($\eta^2 = .196, r = .44$). The results of the pretest ANOVAs confirmed differences in behaviors of help-collaboration, with higher scores in the females, and differences in behaviors of aggressiveness-stubbornness, dominance, and apathy-withdrawal, with higher scores in the males before the intervention. Upon analyzing the change, the results of the MANCOVA carried out with the posttest scores for social behavior as a whole revealed significant differences between males and females, Wilks' Lambda, $\Lambda = .776, F(8, 81) = 2.60, p < .05$, with a very low effect size ($\eta^2 = .055, r = .23$). The results of the posttest ANCOVAs as a function of sex (see Table 2) showed that females decreased their behaviors of aggressiveness-stubbornness, dominance, and apathy-withdrawal significantly more than the males.

The results of the 2x2 ANCOVAS on the interaction Condition*Sex were only significant in two of the variables assessed: behaviors of aggressiveness-stubbornness, $F(8, 151) = 6.09, p < .05$, and behaviors of dominance, $F(8, 151) = 8.74, p < .05$, in both of which females showed significantly more decrease than males.

Discussion

The purpose of the study was to assess the effects of the Cyberprogram 2.0. The results confirm, firstly, that from the adolescents' viewpoint, the intervention stimulated in the experimental groups: (1) a greater decrease of the behaviors of face-to-face bullying victimization; and (2) an increase in diverse positive social behaviors, such as behaviors of social conformity, help-collaboration, self-assurance-firmness, and prosocial leadership. These results ratify the efficacy of the program, confirming hypothesis 1, and partially confirming hypothesis 2, and point in the same direction as other works reporting that anti-bullying programs can promote a decrease of victimization behavior (e.g., del Rey et al., 2012; Fekkes et al., 2006; Gollwitzer et al., 2006; Kärnä et al., 2011; Minton & O'Moore, 2008; Olweus, 2004; Ortega, del Rey, & Mora-Merchán, 2004; Palladino et al., 2012; Sapouna et al., 2010; Williford et al., 2012), increase prosocial behaviors

(Gini, 2004; Grossman et al., 1997; O'Moore, & Minton, 2004), or improve social competence (Leadbetter et al., 2003). These results can be explained by the emphasis on positive and cooperative interactions involved in all the Cyberprogram 2.0 activities. The activities of the program create and structure situations of communication, cooperation, and empathy that explain the positive effects of the intervention regarding the increase of positive social behaviors.

Secondly, the results showed that females decreased various negative social behaviors (*aggressiveness-stubbornness, dominance, apathy-withdrawal*) significantly more than males, although in the remaining variables, the change was similar in both sexes. Hence, hypothesis 3 was not completely confirmed, as the females improved more than the males, significantly decreasing some of their negative social behaviors, but they did not decrease victimization or increase their positive social behaviors more than the males. The females' greater decrease in negative social behaviors could be explained by gender differences in empathy. In all the studies, females have higher levels of empathy (Garaigordobil & García de Galdeano, 2006), and this variable could have promoted more sensitization in the females in the face of the noxious effects of negative social behavior and bullying (which is analyzed in many activities of the program), promoting a greater de-

crease of these behaviors in the females.

On the whole, the results allow us to emphasize the importance of implementing programs during childhood and adolescence to promote socio-emotional development, improve coexistence, and prevent/reduce violence. The best way to prevent violence is to promote coexistence, and our proposal of the Cyberprogram 2.0, an intervention program to prevent and reduce bullying and cyberbullying, an evidence-based practice, is made within this context. The work provides an efficacious intervention tool that has been experimentally validated. As future lines of research, we suggest the assessment of the effect of Cyberprogram 2.0 on other variables, for example, cyberbullying, self-esteem, empathy, conflict-resolution strategies, antisocial behavior, impulsive and premeditated aggressiveness, etc.

As a limitation of the study, we note the use of self-reports, with the bias of social desirability involved, and in future research, we suggest using hetero-reports in which parents and teachers inform of adolescents' behaviors and/or observational techniques to assess and ratify the effects of the program. In addition, the research sample is too small to provide results that are generalizable to the population, so it is suggested to perform the assessment of the program extending the

size and provenance of the sample. It is also suggested to replicate the work with other samples to analyze its generalization (external validity).

Taking into account the severe consequences involved in situations of peer violence, as underlined in diverse studies (Letamendía, 2002), the findings of this investigation are relevant and lead to suggesting the need to implement psychoeducational interventions with the purpose of preventing and eliminating this type of violence. Adolescents' high participation in bullying and cyberbullying situations, as well as the progressive worldwide increase of this phenomenon, leads to underlining the need for prevention and intervention in all educational contexts. There should be an action protocol for cases of bullying in all schools, as well as a plan to prevent violence and promote peaceful coexistence. All the students should participate in the preventive intervention programs in order to reduce the prevalence of bullying in all its modalities. In view of the findings of recent studies (Garaigordobil, 2013), psychological intervention programs to prevent and reduce violence should promote an improvement of the social climate in the classroom, fostering the development of prosocial behavior, social and communication skills, cooperative conflict-resolution skills, empathy, self-esteem, anger control, respect for differences, etc.

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Maite Garaigordobil. Full Professor of Psychological Assessment. Faculty of Psychology of the University of the Basque Country. In charge of the Consolidated Research Group of the Basque Government: "Psychological assessment: Assessment instruments and intervention programs". She directs the project "*Cyberbullying: Prevalence in the Basque Country, links with personal and family variables, and prevention and intervention program*" financed by the Ministry of Economy and Competitiveness (PSI2012-30956), the Department of Education of the Basque Government (IT-638-13) and the University of the Basque Country (UFIPSIXXI11/04).

Vanesa Martínez-Valderrey. Pedagogy graduate. She is a scholarship-holder of the Formation and Research Unit of the Basque Country (UFIPSIXXI11/04) and a Ph.D. candidate of the Faculty of Psychology of the University of the Basque Country. She is currently writing her doctoral thesis, within the line of research on cyberbullying, under the direction of Professor Maite Garaigordobil.

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