Efficacy of the Prev@cib 2.0 program in cyberbullying, helping behaviors and perception of help from the teacher

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Abstract

Introduction. The increase and concern that cyberbullying raises within the educational community show the need for evidence-based programs that allow preventing and intervening in this type of violence. The objective of this study was to analyze the efficacy of the Prev@cib 2.0 program in reducing cyberbullying and promoting helping behaviors and perception of help from the teacher.

Method. A repeated measures pre-post-test design was used with a control group and an intervention group (in the latter, the Prev@cib program was implemented for 4 months). 580 adolescents between 12 and 17 years old ($M =13.52$, $SD =1.27$) participated in the study.

Results. The results showed a significant decrease in cybervictimization and cyberaggression, and an increase in helping behaviors and perception of help from the teacher after the program in the intervention group, compared to the control group.

Discussion or Conclusion. These results confirm the efficacy of the Prev@cib 2.0 program to prevent cyberbullying in adolescence. Furthermore, the importance of the involvement of the entire educational community to prevent this problem is showed.

Keywords: cyberbullying, program, prevention, helping behaviors, teachers.

Resumen

Introducción. El incremento y preocupación que suscita el cyberbullying en la comunidad educativa evidencia la necesidad de programas basados en evidencia que permitan prevenir e intervenir este tipo de violencia. El objetivo de este estudio fue analizar la eficacia del programa Prev@cib 2.0 en la reducción del cyberbullying, y el fomento de las conductas de ayuda y la percepción de ayuda por parte del profesor.

Método. Se utilizó un diseño pre-post-test de medidas repetidas con grupo control y grupo de inter-vención (en este último se implementó el programa Prev@cib durante 4 meses). Participaron en el estudio 580 adolescentes de entre 12 y 17 años ($M =13.52$, $DT =1.27$).

Resultados. Los resultados mostraron una disminución significativa en cibervictimización y ciberagresión, y un aumento en las conductas de ayuda y percepción de ayuda del profesor después del programa en el grupo de intervención, en comparación con el grupo de control.

Discusión y conclusiones. Estos resultados demuestran la eficacia del programa Prev@cib 2.0 para prevenir el acoso cibernético en la adolescencia. Además, se evidencia la importancia de la implicación de toda la comunidad educativa para prevenir esta problemática.

Palabras Clave: cyberbullying, programa, prevención, conductas de ayuda, profesores.

Introduction

Cyberbullying in schools

The increasing use of Information and Communication Technologies (ICT) by adolescents carries on many benefits, but also risks and forms of online victimization, such as cyberbullying (Giménez Gualdo et al., 2017). Cyberbullying is a global health problem that raises great concern in the educational community (Dilmaç et al., 2016; Torgal et al., 2021). This type of violence among peers is defined as intentional and aggressive behavior repeated frequently over the time (by an individual or group) using electronic devices against a victim who cannot easily defend him/herself (Smith et al., 2008: p 376). The prevalence of this problem has increased over the years, due in part to the expansion of technologies and their increased use (Brocado et al., 2017).

Cyberbullying has specific characteristics that increase its harmful potential and make this type of violence even more damaging than other types of problems (Navarro et al., 2015). Unlike bullying, most of the time the victim of cyberbullying does not know who the cyberaggresor is. Likewise, the possibility of being able to cyberattack at any time and place places the victim in a situation of great vulnerability and defenselessness (Buelga et al., 2020 The great interconnectivity between mobile devices, especially since the recent arrival of 5g in smartphones, means that the aggressor can share the humiliation of the victim in a very short time with many people, and through different virtual spaces simultaneously (social networks, instant messaging, apps, etc.) (Buelga et al., 2020; Cuadrado-Gordillo and Fernández-Antelo, 2020).

The consequences of cyberbullying are very negative. In victims, this type of intimidation causes high psychosocial damage, feelings of anxiety, suicidal ideation, fear, nervousness, somatizations, and poorer health-related quality of life (Garaigordobil, 2011; González-Cabrera et al., 2019; Iranzo et al., 2019). Although the most pronounced effects are shown in the victims, in cyberbullying the aggressors also acquire negative habits that influence their current and future criminal behavior (Buelga et al., 2015; Garaigordobil, 2011).

Moreover, when cyberbullying situations occur, the most common attitude of bystanders is not to get involved for fear of retaliation, or because they believe that this problem does not concern them (Bastiaensens et al., 2014). This trend shows in adolescence a worrying lack

of empathy and moral disconnection towards the victims (Barlińska et al., 2018; Lo Cricchio et al., 2021). Thus, although different authors indicate that the first people victims ask for help are their peers (Aricak et al., 2008; García-Maldonado et al., 2011), in many times the victims are isolated, rejected and feel less feelings of affiliation with their peers (Ortega-Barón et al., 2016; Ševčíková et al., 2015). This loneliness and lack of social support make it easier for the aggressor to continue with the cyberaggression and increases the feeling of helplessness in the victim. In this context, the cyberbullying, far from disappearing, tends to worsen and continue over time (Iranzo et al. al., 2019; Ortega-Baron et al., 2016).

In most cases, victims are cyberbullied by their own classmates (Smith et al., 2008). When this happens, victims of cyberbullying are recommended to go to their teachers. However, some studies show that adolescents do not perceive that their teachers can be a support figure and do not perceive that they are competent in helping them if they are victims of cyberbullying (Kowalski & Limber, 2013; Li, 2009). In addition, although teachers' concern about cyberbullying is generally high, according to different studies, many teachers feel a lack of confidence and competence to handle this problem and request further training (González-Calatayud et al., 2016; Li, 2009).

Taking into account the seriousness of cyberbullying, the lack of social support from peers and the low trust of victims with the teachers (González Calatayud et al., 2016; Ševčíková et al., 2015), it is necessary to develop programs against cyberbullying that help teachers and adolescents to prevent and reduce this problem.

Prevention and intervention programs in cyberbullying

In the last two decades, given the prevalence and seriousness of cyberbullying, numerous programs have been developed to prevent and intervene in this type of violence among peers. However, there are few programs that demonstrate their efficacy in a scientific and rigorous way (Gaffney et al., 2019; Polanin et al., 2021). Since the variability of these programs is very wide, some reviews and meta-analyses have recently been published analyzing the efficacy of these programs in reducing cyberbullying (Gaffney et al., 2019; Özgür, 2020; Polanin et al., 2021). Specifically, in a recent meta-analysis Gaffney et al. (2019) indicate that anti-cyberbullying programs can reduce perpetration by approximately 10-15% and victimization by approximately 14%. It should be noted that, although these studies reflect the diversity

of existing practices to date, they generally include published programs with positive results and ignore those that are not published in impact journals. Therefore, it is a somewhat biased measure of the real panorama of the state of the question.

In Spain, some of the most relevant programs in the prevention or intervention of cyberbullying are Cyberprogram 2.0 (Garaigordobil and Martínez-Valderrey, 2014), or Con-red (Del Rey et al., 2016). These programs have proven effective in reducing cyberbullying. However, each one has different sessions frequency, duration, and theoretical frameworks. In this regard, it is important to know, in addition to the efficacy of these programs in preventing cyberbullying, what psychosocial variables are worked on in each of them. Some programs such as Kiva (Williford et al., 2013), Media Heroes (Chaux et al., 2016) or Friendly Attac (DeSmet et al., 2018) highlight the promotion of social support and help from the group as a good strategy against cyberbullying (Bastiaensens et al., 2014; Torgal et al., 2021). Ortega-Baron et al. (2019) also point out the importance of taking into account the entire educational community. At this regard, although some of the programs take the teachers into account (Del Rey et al., 2016; Ortega-Barón et al., 2019; Williford et al., 2013), their involvement rarely goes beyond receiving certain talks, or attending sessions implemented by experts. In short, due to the enormous relevance of cyberbullying in our schools, it is essential to know the programs and variables that intervene for its prevention.

Prev@cib 2.0 Program

The aim of the Prev@cib 2.0 program is the reduction and prevention of cyberbullying in the adolescent population. This program consists of 10 one-hour sessions distributed in three modules: Module 1: focuses on informing about cyberbullying, risks on the Internet, and cybersecurity strategies; Module 2: focuses on raising awareness of the damage and severity of cyberbullying from all its roles (victims, aggressors, and bystanders); and Module 3: prioritizes the involvement of the entire educational community in the reduction and prevention of cyberbullying (Table 1). In addition to these ten sessions, the program consists of two other one-hour sessions to evaluate the effects of the program (pre and post test).

Table 1. *Modules and sessions of the Prev@cib 2.0 program*

	Modules	Sessions
	Module 1. Information	Session 1. Knowing the risks of Internet
		Session 2. Bullying and cyberbullying
		Session 3. Sexting and grooming
		Session 4. Cyber-protection
	Module 2. Awareness	Session 5. Consequences and we are all responsible
		Session 6. What if you were the victim?
	Module 3. Involvement	Session 7. What to do when faced with bullying?
		Session 8. (Cyber)helpers
		Session 9. I like myself and I like you
		Session 10. No more bullying

The Prev@cib program is based on three theoretical frameworks: the ecological model by taking into account the individual, microsocial and contextual risk and protection factors related to cyberbullying (Bronfenbrenner, 1981); the theory of empowerment, since it offers students strategies and resources to know how to act and prevent against this problem (Zimmerman, 2000); and Hellison and Walsh's (2002) model of personal and social responsibility, which promotes the idea of shared responsibility to achieve greater involvement.

The problem of cyberbullying evolves and changes over time. According to this idea, the Prev@cib program has been updated since its first implementation (Ortega-Barón et al., 2019) to meet and understand the new needs of students. Specifically, now the first module places greater emphasis on fostering dialogue between the implementer and students to demystify existing cognitive errors. In the second and third modules, the content that encourages proactivity has been increased to achieve greater involvement in reducing cyberbullying by the entire school. The Prev@cib 2.0 program can be implemented by the teaching staff if they carry out specific training to guarantee its correct implementation.

Objectives and hypotheses

Taking all these antecedents into account, the main objective of this study was to analyze the efficacy of the new version of the Prev@cib 2.0 program on reducing cyberbullying and increasing helping behaviors among peers and their perception of help from the teacher. Specifically, it is hypothesized that after the implementation of this program, the intervention group will have lower scores in cyberbullying (victimization and aggression) and higher scores in helping behaviors and perception of help from the teacher compared to the control group. Moreover, in order to have an additional measure of the program by the teachers, their satisfaction with the training course carried out to implement the program was measured. It is hypothesized that the average score in this survey will be equal to or greater than 3 out of 5.

Method

Participants

To evaluate the efficacy of the Prev@cib 2.0 program, a quasi-experimental design of repeated measures pre-post-test was used with an intervention group and a control group. Initially, the sample was made up of 605 adolescents. However, 25 adolescents (4.13% of the initial sample) were eliminated because they did not fill out the questionnaires correctly or did not attend all the sessions of the Prev@cib program. Finally, the sample was composed of 580 adolescents of both sexes, 308 boys (53.1%) and 272 girls (46.9%), aged between 12 and 17 years ($M = 13.52$, $SD = 1.27$). The participants belonged to 23 classes from four Compulsory Secondary Education (ESO) high schools in the region of Valencia (Spain). 31.6% of the participants were studying 1st ESO (similar to 7th grade), 30% were studying 2nd ESO (similar to 8th grade), 21% were studygn 3rd ESO (similar to 9th grade), and 17.4% were studying 4th ESO (similar to 10th grade). Regarding the experimental condition, the intervention group was made up of 424 students (15 classrooms) and the control group by 156 students (8 classrooms). Both groups were similar in terms of sex ($\chi^2_{(1,580)} = .52$; $p = .471$), age ($t = -4.46$; $p = .656$) and academic grade ($\chi^2_{(1,580)} = 1.79$; $p = .616$). Participation in the implementation of the Prev@cib 2.0 program (intervention group) and in filling out the questionnaires (intervention and control groups) was voluntary.

Instruments

An *ad hoc* survey of satisfaction with the Prev@cib 2.0 training course was used. The 8 items of this survey assess the degree of satisfaction of the teachers who implemented the program with the accessibility, materials, clarity, usefulness, organization, and duration of the Prev@cib 2.0 training course (see Table 2). The response range for this survey is from 1 (*strongly disagree*) to 5 (*strongly agree*).

Both before and after the implementation of the Prev@cib 2.0 program, the following scales were completed by adolescents:

Scale of Victimization through the Mobile Phone and the Internet (CYBVIC; adaptation of Buelga et al., 2016). The CYBVIC scale is made up of 15 items that measure the adolescent's experience as a victim of cyberbullying through the mobile phone or Internet in the last 12 months (e.g., "They have deliberately created a page, a forum or a group just to pick on me and criticize me in front of everyone"). Answer options range from 1 (*never*) to 5 (*many times*). Cronbach's alpha for this scale was .88 in the pre-test and .87 in the post-test.

Scale of Aggressions through the Mobile Phone and the Internet (CYB–AGRESS; adaptation of Buelga et al., 2016). This scale consists of 15 items that measure the frequency with which adolescents have participated in aggressive behaviors through new technologies in the last 12 months (e.g., "I have sent or uploaded to social networks videos or photos of someone to others laugh and make fun of that person and thus make her/him angry"). Answer options range from 1 (*never*) to 5 (*many times*). Cronbach's alpha obtained in this scale was 0.80 (pre-test), and 0.91 (post-test).

Helping Behavior Scale (adapted from Carlo et al., 2003). This scale is made up of 7 items in which a general index of the frequency with which the adolescent helps others is obtained (e.g., "When I see that someone has a problem, I help him/her"). The response range of this scale goes from 1 (*strongly disagree*) to 4 (*strongly agree*). Cronbach's alpha for this scale was 0.73 (pre-test) and 0.71 (post-test).

Teacher's Help Perception Scale (adaptation of Fernández-Ballesteros and Sierra, 1989). It is a subscale of the Classroom Environment Scale (CES) by Moos et al. (1984) It

consists of 7 items that measure, through two response options (true or false), the student's perception of the degree of support and help they receive from their teachers (e.g., "Teachers do more than they should to help their students"). Cronbach's alpha for this scale was 0.70 (pret-test) and 0.72 (post-test).

Procedure

Initially, the four secondary schools were contacted by email or by phone in order to explain the purposes of this research and the Prev@cib 2.0 prevention program. The selection of these schools was carried out through a non-probabilistic convenience sampling given their accessibility and previous interest in participating in this research. After acceptance by the schools and obtaining the corresponding parental authorizations, the researchers assigned the participants to the intervention group (in this group Prev@cib 2.0 program was implemented during tutorial hours), and to the control group (in this group the program was not implemented).

In each secondary school those teachers who voluntarily wanted to implement the intervention program in their classrooms participated in the intervention group. Before the implementation of this program, the 15 teachers of the intervention group were trained through a 20-hour course (5 sessions of 4 hours each session). This training course was carried out by the authors of the program with the aim of training and advising teachers for the correct implementation of the program.

The Prev@cib 2.0 program was implemented throughout the 2019-2020 academic year (during 3-4 months, from October 2019 to January 2020) in the intervention group. More specifically, the teachers carried out one session per week of the Prev@cib program with the adolescents assigned to the intervention group during tutorial hours. In addition, at the beginning, middle and end of the implementation, the authors of the program held follow-up sessions with the implementers in order to advise them, resolve possible doubts and make them feel supported to evaluate the effects of the program. All the adolescents (intervention group and control group) filled out the measurement instruments, before the implementation of the program (pre-test, September 2019) and after its implementation (post-test, end of January 2020). All the instruments were completed during tutoring school hours, with the supervision of two previously trained researchers.

This research carried out with adolescents respected the ethical values demanded in the research, respecting the fundamental principles of the Declaration of Helsinki, and the UNESCO Universal Declaration of Human Rights. In addition, this research also obtained approval to be carried out by the Ethics Committee of the University of Valencia (number: H1456762885511).

Data analyses

Data analysis was carried out using the SPSS statistical package, version 24. Initially, a reliability analysis was performed to check the internal consistency of the scales used in this research, both at Time 1 and Time 2. The measures of central tendency and standard deviation were calculated in each of the items of the satisfaction survey with the Prev@cib 2.0 training course. To evaluate the effects of the program on each of the study variables, several 2 x 2 mixed factorial ANOVAs were used, with a between-subjects factor (intervention group and control group) and a within-subjects factor (before and after the program: Time 1 (pre-test) and Time 2 (post-test)). The use of this analysis is recommended when the groups selected are natural and not equal in the initial situation (Weinfurt, 1995). The interaction term in the mixed factorial ANOVA describes the effect of the program and is equivalent to t-tests on difference scores between group (intervention o control) and time (Time 1 o Time 2) in each repeated measure. The eta-square (η^2) value is used as an indicator of the size of the effect. Cohen (1988) suggested that $\eta^2 \leq 0.06$ can be considered a 'small' effect size, ≥ 0.07 y ≤ 0.14 'medium' effect size, and >0.14 is a 'large' effect size.

Results

Teachers' satisfaction with Prev@cib 2.0 training course

Prior to the implementation of the Prev@cib 2.0 program, a training course was held with the 15 teachers who implemented the program in their classrooms. The results of the satisfaction survey completed in the last session of this course show a very high level of satisfaction on the part of the teachers ($M = 4.37$ sobre 5, $SD = 0.44$). Table 2 shows the means and standard deviations of each one of the items of this survey, related to the teachers' satisfaction with the accessibility of the researchers, materials, clarity, usefulness, organization, duration, and recommendation of this course to another teacher.

Table 2. *Teacher satisfaction survey with the training course*

	M	*SD*
1. The organization of the course (materials and schedules) has been adequate.	4.20	0.41
2. The researcher who has given us the training has clearly transmitted the objectives and contents of the Prev@cib Program.	4.60	0.63
3. The duration of the course (number of training sessions) has been adequate to learn how to implement the Prev@cib Program.	3.33	1.11
4. The researcher has provided us with sufficient and useful documentation and materials to know how to implement the program.	4.67	0.49
5. The main researcher of the program has been available to resolve and address our questions and suggestions.	4.80	0.41
6. This course has taken into account our suggestions to improve the program.	4.47	0.52
7. The training has been useful to know how to implement the Prev@cib Program in my tutoring classes.	4.27	0.70
8. If in the future a reduced version of the Prev@cib Program is implemented in other courses, I would recommend doing this training to my colleagues	4.60	0.63

Effects of the Prev@cib 2.0 program in cyberbullying (victimization and aggression)

Regarding cyberbullying victimization, a significant interaction effect was found between time and group, $F(1, 578) = 5.32$, $p = .021$, with a small effect size $\eta^2 = .009$. As shown in Table 3 and Figure 1, cybervictimization decreased in the intervention group, while in the control group the scores on this variable increased slightly. A similar result was obtained respected to cyberbullying aggression, $F(1, 578) = 13.75$, $p = <.001$, also with a small effect size $\eta^2 = .023$ (Table 3). As shown in Figure 1, after the implementation of the program, the intervention group decreased their cyberaggression scores while the control group increased them.

Table 3. *Inter-group effects and repeated measures analyses of variance (ANOVA 2 x 2) in cyberbullying (victimization and aggression)*

Variables	Group	M (SD) Pretest	M (SD) Post-test	F (p) Time Effect	F (p) Group Effect	F (p) Interaction Effect	η^2
Victimization (cyberbullying)	Intervention	1.26 (0.41)	1.19 (0.32)				
	Control	1.25 (0.37)	1.27 (0.41)	2.60	1.16	5.32**	.009
Aggression (cyberbullying)	Intervention	1.21 (0.28)	1.14 (0.32)				
	Control	1.19 (0.30)	1.24 (0.43)	0.27	2.31	13.75***	.023

Note: η^2= eta squared effect size; ≥ 0.07 and ≤ 0.14 medium effect and > 0.14 large effect; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$
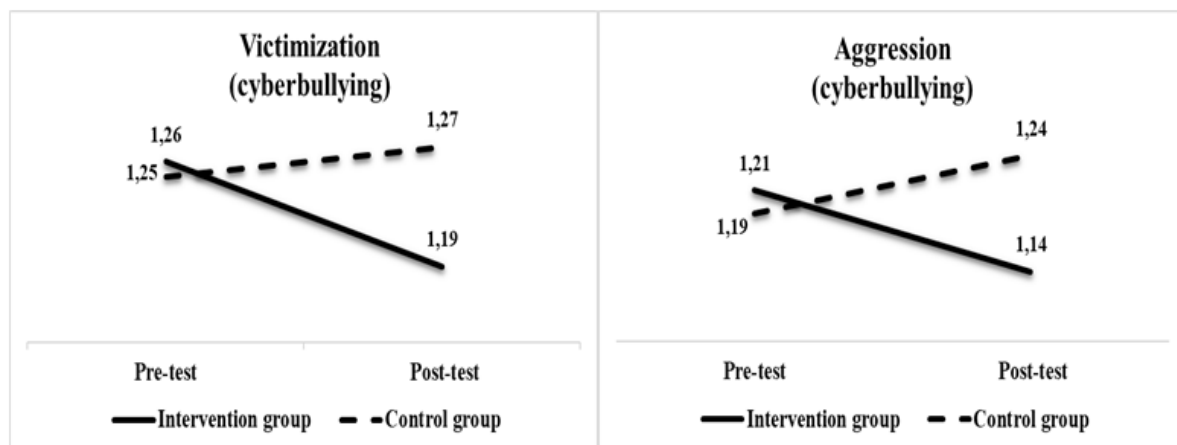

Figure 1. *Means in cyberbullying (victimization and aggression) in the control group and the intervention group in pre-test and post-test*

Effects of the Prev@cib 2.0 program in helping behaviors among peers and the perception of help from the teacher

A significant interaction effect (time x group) was obtained for the helping behaviors among classmates $F(1, 578) = 4.85$; $p = .028$), with a small effect size $\eta^2 = .008$. Helping behaviors increased slightly in the intervention group, while they decreased in the control group (Table 4, Figure 2). The results also showed a significant interaction effect on the perception of help from the teacher. $F(1, 578) = 32.04$, $p = <.001$, with a small effect size $\eta^2 = .053$. It is observed that the perception of help from the teacher increased slightly in the intervention group while in the control group there was a notable decrease in the scores in this variable (Table 4 and Figure 2).

Table 4. *Inter-group effects and repeated measures analyses of variance (ANOVA 2 x 2) in helping behaviors and perception of help from the teacher*

		M (SD)		*F (p)*			η^2
Variables	Group	Pre-test	Post-test	Time Effect	Group Effect	Interaction Effect	
Helping Behaviors	Intervention	3.18 (0.37)	3.23 (0.40)				
	Control	3.27 (0.42)	3.22 (0.44)	0.14	2.05	4.85*	.008
Perception of help from the teacher	Intervention	1.59 (0.28)	1.63 (0.26)				
	Control	1.68 (0.18)	1.54 (0.15)	12.25**	.001	32.04***	.053

Note: η^2= eta squared effect size; ≥ 0.07 and ≤ 0.14 medium effect and > 0.14 large effect;

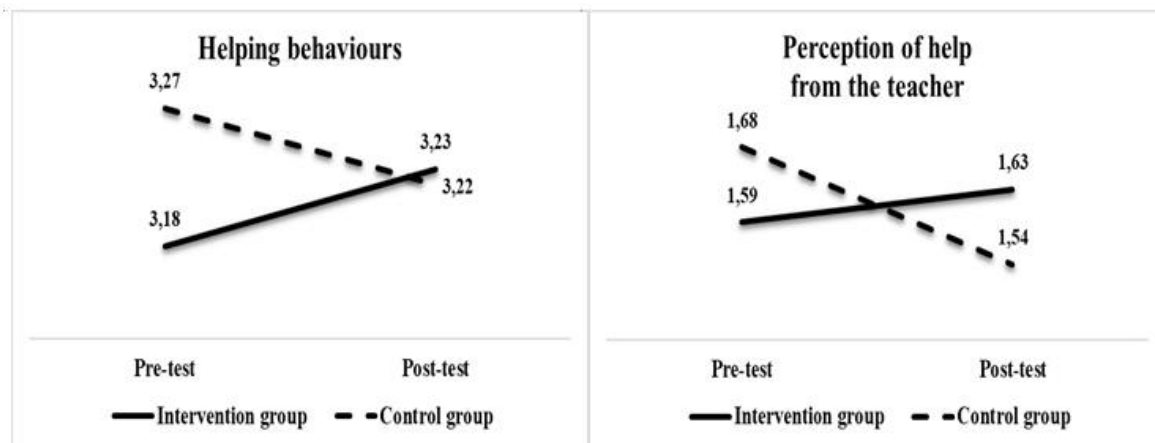* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Figure 2. *Means in helping behaviors and perception of help from the teacher in the control group and the intervention group in pre-test and post-test*

Discussion and Conclusions

The main objective of this study was to evaluate, after its update, the efficacy of the Prev@cib 2.0 program. Specifically, it has been evaluated the efficacy of this program in reducing cyberbullying (victimization and aggression), as well as in increasing helping behaviors among students and perception of help from the teacher. According to previous literature, it is essential that intervention and prevention actions demonstrate their efficacy (Gaffney et al., 2019; Polanin et al., 2021). However, although it is a very rare practice, it is also important that already validated programs be updated based on new needs in a problem as changing as cyberbullying.

The results of this study once again show the efficacy of the Prev@cib 2.0 program in reducing cyberbullying compared to the previous version of this program (Ortega-Barón et al., 2019). Thus, the initial hypothesis is confirmed since the intervention group significantly decreases its scores on cybervictimization and cyberaggression compared to the control group. These results are in line with recent systematic reviews or meta-analyses carried out of international programs that also obtained positive effects in reducing cyberbullying (Gaffney et al., 2019; Özgür, 2020; Polanin et al., 2021). In Spain, although they use different method-

ologies, contents, and duration, the Cyberprogram 2.0 program (Garaigordobil and Martínez-Valderrey, 2014) and Conred program (Del Rey et al., 2016) also reduce this type of violence among peers. Taking into account the damage that cyberbullying causes in students (Garaigordobil, 2011; Iranzo et al., 2019), the continuous implementation of programs that are effective and up to date is absolutely necessary to guarantee the correct development of the adolescents and the peaceful coexistence in the schools (Hinduja and Patchin, 2014). Moreover, the trend of increasing cyberbullying scores (victimization and aggression) in the control group, reinforces the idea that if this problem is not intervened in this problem, there is a risk that cyberbullying will become normalized and worsen in schools. In this sense, the lack of prevention affects the well-being of students (Estrada-Esparza et al., 2016; Stauffer et al., 2012).

Regarding helping behaviors, the results obtained also confirm the initial hypothesis raised. Thus, in this study the intervention group increased helping behaviors, while control group decrease the scores in this variable. In this line, other programs such as Friendly Attac (DeSmet et al., 2018), or Cyberprogram 2.0 (Garaigordobil and Martínez-Valderrey, 2014) have also obtained positive effects by increasing prosocial behavior in their participants. Also, the Beatbullying program Cybermentors (Thompson & Smith, 2011) even offers online mentoring by previously trained adolescents called Cybermentors. Considering that victims generally ask their peers for help, but do not receive support from them (García-Maldonado et al., 2011; Lo Cricchio et al., 2021), the promotion of helping behavior from the peer group seems to be one of the best strategies to help victims get out of their bullying situation and stop the behavior of cyberbullies (Torgal et al., 2021).

Regarding the perception of help from the teacher, the results of the Prev@cib 2.0 program also confirmed the initial hypothesis by observing an increase in the intervention group in this variable compared to the control group. As in the Conred program (Del Rey et al., 2016), or Asegúrate (Del Rey et al., 2019), a relevant purpose of the Prev@cib 2.0 program is the involvement of teachers in the prevention program. The results of this study suggest, along the lines of Cava and Musitu (2002), that when teachers make an effort to establish positive contacts with their students and offer them support, aggressive behaviors decrease, and the degree of victimization is reduced. This finding is very relevant if we take into account that previous studies show that adolescents tend to distrust the ability of teachers to help them

in the event of being victims of cyberbullying (Kowalski & Limber, 2013; Sourander et al., 2010). In addition, the scientific literature also shows that teachers often consider themselves to be less competent and demand more training to deal with this problem (DeSmet et al., 2018; González Calatayud et al., 2016). Thus, the Prev@cib 2.0 program specifically addresses this training need, since the teachers who implemented this program had a high degree of satisfaction with the course. School is one of the most important areas of socialization for adolescents, so it is important that the adolescents feel safe and develops positively in the school context.

This study also has some limitations that should be considered. A first limitation concerns sample representativeness. Although the sample of participants is large for a classroom intervention, the generalization of the results in the adolescent population should be interpreted with caution. In future research, the Prev@cib 2.0 program could be adapted and implemented in other samples of adolescents from other countries of the world. Furthermore, it would be convenient to carry out a longitudinal study to verify the stability of the changes observed in the intervention group in the long term. Also, the use of self-reports as the only evaluation instruments constitutes another limitation of the study. Even so, previous studies highlight the reliability and validity of using adolescent self-reports for measuring risk behaviors is acceptable (Flisher et al., 2004).

Despite these limitations, this study provides evidence of a cyberbullying prevention program in adolescents, the Prev@cib 2.0 program, which updates its contents and continues to demonstrate its effectiveness scientifically. Given the concern raised by cyberbullying in schools, this is a very significant contribution for the entire educational community.

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