Lockdown, cyberhate, and protective factor of social-emotional and moral competencies in Primary Education

Confinamiento, ciberodio y factor protector de las competencias socioemocionales y morales en Educación Primaria

🆔 Dr. Vicente-J. Llorent. Associate Professor, Department of Education, University of Cordoba (Spain) (vjllorent@uco.es) (https://orcid.org/0000-0002-6795-2933)

🆔 Dr. Carolina Seade-Mejía. Professor, Department of Education, National University of Education, Cañar (Ecuador) (lucia.seade@unae.edu.ec) (https://orcid.org/0000-0002-8325-1977)

🆔 Dr. Ximena Vélez-Calvo. Professor, Faculty of Philosophy and Human Sciences, University of Azuay, Cuenca (Ecuador) (xvelez@uazuay.edu.ec) (https://orcid.org/0000-0002-4451-9547)

ABSTRACT

The COVID-19 pandemic caused a major crisis in numerous social spheres, especially among children, due to the closure of schools in hundreds of countries. The lockdown resulted in classes being given exclusively online, which could have led to increased participation in antisocial online behaviour such as cyberhate. This research aims to find out the impact of lockdown on cyberhate in children in Primary Education and to analyse the role of social, emotional and moral competencies as a protective factor. The study was conducted with 792 primary school pupils (Mage=10.81, SD=0.85) from Cuenca (Ecuador). A questionnaire focusing on cyberhate, social and emotional competencies, empathy, and moral emotions scales was used. A quantitative study was carried out with a longitudinal design with two data rounds of collection separated by an interval of five months. The results showed that total cyberhate and its dimensions, perpetration and propagation, increased longitudinally. Cyberhate among these participants could be predicted, after five months of lockdown, for being male, being in the highest school year, attending a state school, and obtaining low scores in moral emotions. The effects of the lockdown have highlighted the importance of face-to-face social relationships, which has exciting implications on the importance of school in developing social, emotional, and moral competencies which foster coexistence and respect for diversity.

RESUMEN

La pandemia por COVID-19 provocó una gran crisis en numerosos ámbitos sociales, especialmente en los niños, por el cierre de las escuelas en cientos de países. El confinamiento implicó un contexto educativo puramente virtual, lo cual pudo aumentar la participación en ciberconductas antisociales como el ciberodio. El objetivo de la presente investigación es conocer el impacto del confinamiento en el ciberodio de los niños de Educación Primaria, y analizar el papel de las competencias socioemocionales y morales como factor protector. El estudio se realizó con 792 alumnos de Educación Primaria (Medad=10,81, DT=0,85) de Cuenca (Ecuador). Se utilizó un cuestionario compuesto por las escalas de ciberodio, competencias socioemocionales, empatía y emociones morales. Se realizó un estudio cuantitativo con un diseño longitudinal con dos recogidas de datos en un intervalo de cinco meses. Los resultados mostraron que tanto el ciberodio total y sus dimensiones, agresión y promoción, aumentaron longitudinalmente. El ciberodio entre estos participantes se podría predecir tras cinco meses de confinamiento por ser varón, por pertenecer al curso superior, por asistir a un centro público y por tener bajas puntuaciones en emociones morales. Los efectos del confinamiento han destacado la importancia de las relaciones sociales cara a cara, lo cual tiene interesantes implicaciones sobre la importancia de la escuela en el desarrollo de las competencias socioemocionales y morales para la convivencia y el respeto a la diversidad.

KEYWORDS | PALABRAS CLAVE

Cyberhate, socio, emotional and moral competencies, empathy, lockdown, primary education, COVID-19.
Ciberodio, competencias socioemocionales y morales, empatía, confinamiento, educación primaria, COVID-19.

1. Introduction and state of the art

The COVID-19 pandemic led to a major crisis in many social spheres, especially amongst children (Stassart et al., 2021). As regards education, the state of health emergency led to the complete shut-down of face-to-face classes in over 200 countries in order to prevent the spread of the virus and alleviate its impact. Lockdown resulted in classes being given exclusively online, in which Information and Communication Technologies (ICT) and the Internet became vital tools and were, in fact, the only means of maintaining contact with school (UNESCO, 2020). The increased use of the Internet led to the greater vulnerability of individuals and exposed young people in particular to a greater degree of disinformation and manipulation on social networks, with its accompanying antisocial online behaviours, such as cyberhate (Ferrera et al., 2020).

Cyberhate consists of intentional aggression on the Internet, with the purpose of harming other people via online content, and it is motivated by issues such as sexual orientation, skin colour, nationality, religion, and political ideology, amongst others. Cyberhate has certain special characteristics such as the possibility of carrying out aggressive acts at any time, reaching a much wider audience and causing more long-lasting harm (Bedrosova et al., 2022; Hawdon et al., 2017). Added to these characteristics are the aggressor's perception of anonymity as well as the victims' lack of control over the situation in which they find themselves and the difficulties they face in defending themselves online (Wachs & Wright, 2018).

Over recent years, there has been a significant rise in cyberhate, with a high percentage of children and adolescents being exposed to personal attacks online (Blaya et al., 2020; Kansok-Dusche et al., 2022). The lockdown, with its massive increase in online communication, also boosted cyberhate. The consequences of cyberhate can be extremely harmful, and can affect individuals in different ways, such as losing trust in other people (Näsi et al., 2015), lowering individual well-being (Keipi et al., 2018) and a lack of academic motivation (Isik et al., 2018). Cyberhate is also a complement, in some cases, or an antecedent, in others, of hate crimes in real life, such as shootings, stabbings, and bomb attacks (Johnson et al., 2019).

However, further research is required into antisocial online behaviour in order to identify predictors of cyberhate among adolescents. Some interventions have been made in education, but these are still rare, as evidenced by a recent meta-analysis which discussed two quantitative interventions (Windisch et al., 2022). In this context, the Global Cybersecurity Report 2020 (ITU, 2021) made a clear reference to the field of education, proposing different measures to protect children on the Internet, such as innovations in the curriculum and specific teacher training in the compulsory stages of the school systems. The vital importance of the school's stance towards cyberhate highlights the need to carry out studies to identify the most effective factors to ensure the success of educational interventions. Numerous educational interventions have already been carried out to reduce and eradicate antisocial online behaviour such as cyberbullying (Gaffney et al., 2019), all of which stress the importance of the pupils developing their social and emotional competencies. These competencies have also played a key role, directly and indirectly, in intervention programs against cyberbullying, according to one meta-analysis which included 50 studies with 320 effect sizes (Polanin et al., 2022). According to current scientific knowledge, social and emotional competencies are negatively related to antisocial online behaviour such as cyberbullying (Rodríguez-Álvarez et al., 2022), so we would expect there to be a similar relationship with cyberhate (Bedrosova et al., 2022; Wachs et al., 2022). Although, to date, no studies have verified this approach, it is certainly a high priority given the relevance of the topic. Different studies have found that high levels of social, emotional, and moral competencies are related to low levels of aggressive and antisocial behaviour, and that a high level of social, emotional, and moral competencies protects children and young people against different antisocial behaviour such as bullying (Gaffney et al., 2019; Yang et al., 2020) and cyberbullying (Rodríguez-Álvarez et al., 2022).

The social and emotional competencies are composed of the set of knowledge, skills and attitudes related to self-awareness, self-motivation, self-management, social awareness, pro-social behaviour, and responsible decision making whose role is to manage emotions and interpersonal relationships in various social contexts (Zych et al., 2018), including online interactions. Therefore, it may be possible to use social and emotional competencies as a protective factor to help improve measures designed to prevent and reduce cyberhate. These skills play an essential role in establishing a peaceful coexistence, are essential

for learning and knowing how to relate properly with others and enable us to resolve conflicts peacefully through mutual respect (CASEL, 2012).

One of the key social and emotional competencies—which are, in turn—related to moral aspects (Allemand et al., 2015), is empathy. Empathy facilitates social relationships and can be defined as the ability to understand and share another person's emotional state. It consists of two dimensions: cognitive empathy and affective empathy. Low levels of empathy are associated with antisocial behaviour and are a predictor of aggressive behaviour (Campos et al., 2022; Jolliffe & Farrington, 2004). Moral growth, on the other hand, involves effectively managing the emotions learned through the experiences or relationships gained from moral events, and is what prompts us to do good and avoid evil (Kroll & Egan, 2004), and to defend people's general interests and well-being (Haidt, 2003). Moral development is an essential complement to the social and emotional field and helps promote coexistence and respect for diversity (Caurín et al., 2019).

According to the review of the scientific literature, high levels of social, emotional, and moral competencies could safeguard against cyberhate among adolescents. However, to date, few studies have been conducted in this area and, therefore, further research is needed to look at the relationship between cyberhate and social and emotional competencies in greater depth, given the potential these competencies have for prevention of and intervention in different antisocial behaviours.

The objective of this research is therefore twofold: firstly, to find out what impact the lockdown had on cyberhate and, secondly, to analyse the usefulness of social, emotional, and moral competencies as a protective factor for children in Primary Education. The break from face-to-face schooling and the increased use of ICT during lockdown support the formulation of the following hypotheses:

H1: Five months into lockdown, cyber-hate among pupils will have increased. Social, emotional, and moral competencies are vital for the respectful and peaceful promotion of interpersonal relationships and help to improve inclusion; therefore, they are expected to be negatively related to cyberhate, which leads us to hypothesis H2: Social, emotional, and moral competencies are protective factors against cyberhate.

2. Method

2.1. Participants

The study was carried out with 792 participants between the ages of 9 and 14, with a mean age of around 11 (M=10.81, SD=0.85), and consisted of: 9-year-olds: n=24; 10-year-olds: n=279; 11-year-olds: n=337; 12-year-olds: n=133; 13-year-olds: n=16; and 14-year-olds: n=3. Of the pupils, 49.4% (n=394) were male and 50.6% (n=398) were female, all attending 15 primary schools in the city of Cuenca (Ecuador); of these, eight were state schools, representing 61.2% (n=485) and seven were private, representing 38.8% (n=307) of the sample. The sample was distributed evenly over all the classes in the last two years of Primary Education, with 49.6% (n=393) in the sixth year and 50.4% (n=399) in the seventh year. Absent pupils (n=37) were not included in the analyses. A total of 93.5% (n=740) of the participants were of Ecuadorian nationality, and 6.5% (n=51) of the children were foreign. Most of the parents were Ecuadorian, with 6.3% (n=50) of the mothers and 7.2% (n=57) of the fathers being foreign. The ethnic-cultural diversity was organised into two large groups, with the majority group containing Ecuadorians and Ecuadorian parents (n=678) and the minority group (n=114) consisting of those children whose hometown or nationality, or that of their parents, was not Ecuadorian.

2.2. Instruments

The data were collected from a questionnaire consisting of items related to socio-educational characteristics (gender, grade, nationality, nationality of parents, belonging to native groups and school), and the following four specific scales were used to obtain the study variables:

The Cyberhate Questionnaire (Zych, in press) was used to assess cyberhate among the participants. It consists of 15 questions with responses on a five-point Likert scale from 1 ("Strongly disagree") to 5 ("Strongly agree"). The items refer to behaviour exhibited over the past three months such as expressing hate towards others online, sharing hurtful photos or videos online, or encouraging people to insult certain minorities online. The instrument (Ω_{T1}=.95; Ω_{T2}=.88) has a two-dimensional structure: Perpetration of

cyberhate (Ω_{T1}=.96; Ω_{T2}=.83), made up of 10 items (for instance, "I have posted messages on forums or networks that express hate towards minorities"); and Propagation of cyberhate (Ω_{T1}=.96; Ω_{T2}=.71), made up of five items (e.g., "I have tried to convince people, on the Internet, that certain minorities should have no say in affairs").

The Social and Emotional Competences Questionnaire (Zych et al., 2018), which consists of 16 questions, with responses on a five-point Likert scale from 1 ("Strongly disagree") to 5 ("Strongly agree"). The items refer to behaviour exhibited over the past three months, such as being aware of the thoughts that influence our emotions or knowing how to help people in need. The instrument has excellent reliability (Ω_{T1}=.84; Ω_{T2}=.72), although this is lower in its four factors: Self-awareness (Ω_{T1}=.68; Ω_{T2}=.62), with four items (e.g., "I know how my emotions influence what I do"); Self-management and motivation (Ω_{T1}=.65; Ω_{T2}=.58), with three items (e.g., "I know how to motivate myself"); Social awareness and prosocial behaviour (Ω_{T1}=.68, Ω_{T2}=.61), with six items (e.g., "I pay attention to the needs of others"); and Responsible decision making (Ω_{T1}=.54; Ω_{T2}=.44), with three items (e.g., "I make decisions carefully analysing possible consequences").

The Empathy Scale (Jolliffe & Farrington, 2004), validated in Spanish by Villadangos et al. (2016), can be taken as part of the social and emotional dimension (Allemand et al., 2015) and has adequate reliability (Ω_{T1}=.84; Ω_{T2}=.65). The items refer to behaviour such as "I can usually realise quickly when a friend is angry" or "I am not usually aware of my friends' feelings", exhibited over the last three months. It consists of 20 questions to be answered using a five-point Likert scale from 1 ("Strongly disagree") to 5 ("Strongly agree"). This scale is divided into two factors: Affective (Ω_{T1}=.58; Ω_{T2}=.48), with 11 items (e.g., "I often get swept up in my friends' feelings"); and Cognitive (Ω_{T1}=.74; Ω_{T2}=.56), with nine items (e.g., "I usually realise how people are feeling even before they tell me").

The Moral Emotions Scale (Álamo et al., 2020) is made up of five items answered on a Likert scale, with five categories from 1 ("Strongly disagree") to 5 ("Strongly agree"), which has a reliability index of Ω_{T1}=.78 and Ω_{T2}=.50. The items focus on a range of moral emotions, such as guilt, regret, pride, or shame, which appear when faced with moral transgressions (e.g., "I feel guilty if I have hurt a schoolmate").

2.3. Design and procedure

This is a quantitative and longitudinal study. The sample was selected for convenience and accessibility, using non-probabilistic sampling, thanks to the permission granted by the educational institutions. First, the researchers contacted the heads of the selected schools in Cuenca (Ecuador) to ask for their collaboration in the study. Next, we obtained the parents' informed consent. Data collection was performed in two rounds: first, in January and February 2020 (T1) just before lockdown, and second, in July 2020 (T2), at the end of the school year, after five months of lockdown. The surveys were administered collectively to class groups during school hours and took approximately 20 minutes to complete. Participation was voluntary and only anonymous individual codes were used for the longitudinal matching of the subjects. At T1, the participants were supervised by the researchers, who delivered and collected the questionnaires, without any intervention from the teaching staff. At T2, since the face-to-face classes had been suspended due to the COVID-19 pandemic and the pupils were still in lockdown, the questionnaires were collected by the researchers online and by the teachers admitting the pupils to an online class in which the researchers provided the questionnaires. In this study, the same participants answered both questionnaires (T1 and T2).

2.4. Data analysis

The reliability of the scales and their dimensions were calculated using McDonald's Omega, with the Factor 10.5.02 computer program. We performed descriptive analyses of frequencies, standard deviations, and percentages, as well as comparative analyses between the pre-lockdown variables and after five months of lockdown using Student's t test. Cohen's d was also calculated to find the size of the effect. Pearson correlations were performed to analyse the univariate relationships between gender, grade, type of school, ethnic-cultural group, social, emotional and moral competencies, and cyber-hate. The multivariable study to predict the unique relationship of cyberhate with the rest of the study variables was

carried out using cross-sectional and longitudinal linear regression analyses. Gender and school year were included in different analyses as control variables because of their close relation to cyberhate (Obermaier & Schumuck, 2022).

The ethnic-cultural group and type of school were also taken into account, as they mark significant educational differences between the pupils in the study context (Delprato & Antequera, 2021; Garaigordobil et al., 2015; Isik et al., 2018). The data analyses were carried out using the SPSS 25 statistical package, except in the case of Cohen's d, where the Campbell Collaboration calculator was used.

3. Results

Comparative analyses of cyberhate before lockdown and after five months of lockdown showed significant changes. Cyberhate and its two factors increased significantly during lockdown, with considerable effect sizes (Table 1).

Table 1. Comparison of cyberhate before lockdown and after five months of lockdown					
	Before lockdown M (SD)	After five months of lockdown M (SD)	t	p	d (95%CI)
Perpetration of cyberhate	1.40 (0.55)	1.80 (0.56)	-33.77	<.001	-0.72 (-0.82. -0.62)
Propagation of cyberhate	1.38 (0.59)	1.82 (0.60)	-29.99	<.001	-0.74 (-0.84. -0.64)
Total Cyberhate	1.39 (0.54)	1.81 (0.52)	-41.12	<.001	-0.79 (-0.89. -0.69)

Gender, school year, and type of school showed a significant relationship with cyberhate in all cases, particularly with Perpetration of aggression and total Cyberhate. In the case of the ethnic-cultural group, the only correlation which appeared was with the Propagation of cyberhate after five months of lockdown (T2).

The correlations of the different social, emotional, and moral variables showed a significant, negative relationship with cyberhate, both cross-sectional and longitudinal, except for the absence of any correlation between affective empathy and cyberhate and its dimensions (Table 2).

Table 2. Correlations of gender, school year, type of school, and different social, emotional and moral variables with cyberhate						
	Aggression of cyberhate (T1)	Promotion of cyberhate (T1)	Total Cyberhate (T1)	Aggression of cyberhate (T2)	Promotion of cyberhate (T2)	Total Cyberhate (T2)
Gender(Female=0; male =1)	.086*	.069	.083*	.112**	.063	.105**
School Year (T1)	.176**	.125**	.164**	.254**	.035	.196**
Type of school (T1)	-.112**	-.118**	-.118**	-.144**	-.124**	-.151**
Ethnic-cultural (T1)	.024	.051	.035	.020	.097**	.052
Self-awareness (T1)	-.136**	-.091*	-.125**	-.091*	-.076*	-.095**
Self-manag. and motiv. (T1)	-.121**	-.079*	-.110**	-.123**	-.050	-.108**
Soc. awar. and pros beh. (T1)	-.135**	-.137**	-.141**	-.092**	-.127**	-.116**
Respons. decis. making (T1)	-.109**	-.092**	-.107**	-.080*	-.077*	-.087*
Soc. emot. comp. total (T1)	-.168**	-.136**	-.162**	-.127**	-.114**	-.135**
Cognitive empathy (T1)	-.091*	-.065	-.085*	-.078*	-.077*	-.086*
Affective empathy (T1)	-.038	-.036	-.038	-.054	-.058	-.062
Empathy total (T1)	-.072*	-.057	-.069	-.075*	-.077*	-.084*
Moral emotions (T1)	-.145**	-.142**	-.149**	-.153**	-.148**	-.167**
Perpetration of cyberhate (T1)	1	.858**	.983**	.817**	.638**	.835**
Propagation of cyberhate (T1)	.858**	1	.938**	.729**	.755**	.818**
Cyberhate total (T1)	.983**	.938**	1	.813**	.701**	.857**
Perpetration of cyberhate (T2)	.817**	.729**	.813**	1	.595**	.950**
Propagation of cyberhate (T2)	.638**	.755**	.701**	.595**	1	.817**
Cyberhate total (T2)	.835**	.818**	.857**	.950**	.817**	1

Note. Significance level *p<.05, **p<.01, ***p<.001.

Linear regression analyses, in which socio-educational characteristics gender, school year, type of school, and ethnic-cultural group) were included as control variables, take into account social, emotional, and moral competencies (using the scales of social and emotional competencies, empathy, and moral emotions) at T1 to predict cyberhate and its factors.

Table 3. Predictive variables (T1) in cross-sectional and longitudinal relation with the Perpetration of cyberhate				
	Cross-sectional relations with the Perpetration of cyberhate		Longitudinal relations with the Perpetration of cyberhate	
	β	p	β	p
Gender (Female=0; male =1)	0.08	.03	0.10	.01
School Year	0.17	<.001	0.18	<.001
Type of school	-0.07	.06	-0.13	<.01
Ethnic-cultural	0.02	.61	0.05	.16
Self-awareness	-0.08	.10	-0.02	.67
Self-management and motivation	-0.01	.74	-0.02	.64
Social. awareness and pros beh	0.01	.85	0.03	.49
Responsible decision making	-0.02	.63	-0.01	.73
Cognitive empathy	-0.07	.09	-0.06	.18
Affective empathy	0.05	.22	0.02	.66
Moral emotions	-0.10	.02	-0.13	<.01

The predictive role of social and emotional competencies in Perpetration of cyberhate (Table 3), Propagation of Cyberhate (Table 4) and the total of Cyberhate (Table 5) were analysed cross-sectionally (before lockdown) and longitudinally (after five months of lockdown).

Table 4. Predictive variables (T1) in cross-sectional and longitudinal relation with the Propagation of cyberhate				
	Cross-sectional relations with the Propagation of cyberhate		Longitudinal relations with the Propagation of cyberhate	
	β	p	β	p
Gender (Female=0; male =1)	0.06	.12	0.12	<.01
School Year	0.11	<.01	0.25	<.001
Type of school	-0.09	.01	-0.12	<.01
Ethnic-cultural	0.05	.18	0.02	.62
Self-awareness	-0.01	.77	-0.02	.70
Self-management and motivation	0.01	.79	-0.05	.23
Social awaren. and pros. behav.	-0.04	.40	0.06	.16
Responsible decision making	-0.02	.60	-0.01	.73
Cognitive empathy	-0.03	.54	-0.07	.12
Affective empathy	0.02	.67	0.03	.44
Moral emotions	-0.10	.02	-0.12	<.01

From the analysis of cross-sectional relationships with cyberhate (T1), where the independent variables belong to T1, all the models proposed are significant. A higher level of Perpetration of cyberhate before lockdown can be predicted ($R^2 = .08$, F=5.76, p<.001) for being male, being in the highest school year (seventh year), and having a low score in Moral emotions. Also, a greater Propagation of cyberhate before lockdown can be predicted ($R^2 = .05$, F=3.91, p<.001) for being in the highest school year (seventh year), attending a state school and having a low score in Moral emotions. Finally, a higher score in the total of Cyberhate before lockdown can be predicted ($R^2 = .07$, F=5.24, p<.001) for being male, being in the highest school year (seventh year), attending a state school, and having a low score in Moral emotions.

Table 5. Predictive variables (T1) in cross-sectional and longitudinal relation with Cyberhate total				
	Cross-sectional relations with Cyberhate total		Longitudinal relations with Cyberhate total	
	β	p	β	p
Gender (Female=0; male =1) (W1)	0.07	.04	0.05	.21
School Year (W1)	0.15	<.001	0.02	.60
Type of school (W1)	-0.08	.03	-0.11	<.01
Ethnic-cultural (W1)	0.03	.40	0.10	<.01
Self-awareness (W1)	-0.06	.23	-0.02	.68
Self-management and motivation (W1)	-0.01	.90	0.04	.35
Social. awareness and pros beh (W1)	-0.01	.86	-0.04	.44
Responsible decision making (W1)	-0.02	.60	-0.01	.79
Cognitive empathy (W1)	-0.06	.17	-0.03	.56
Affective empathy (W1)	0.04	.33	-0.01	.80
Moral emotions (W1)	-0.10	.01	-0.11	<.01

The longitudinal analysis of the independent variables (T1) with cyberhate and its dimensions (T2) reveals that all the linear regression models are significant. A higher level of cyberhate aggression after five months of lockdown can be predicted ($R^2 = .12$, F=9.16, p<.001) for being male, being in the highest school year (seventh year), attending a state school, and obtaining a low score in Moral emotions. Also, a higher level of Promotion of cyberhate after five months of lockdown can be predicted ($R^2 = .05$,

F=3.67, p<.001) for being male, being in the highest school year (seventh year), attending a state school and obtaining a low score for *Moral Emotions*. Finally, a higher total of Cyberhate after five months of lockdown can be predicted (R^2=.10, F=7.27, p<.001) for attending a state school, belonging to the ethnic-cultural minority, and obtaining a low score for *Moral Emotions*.

4. Discussion and conclusions

The lockdown which was imposed during the COVID-19 pandemic led to a significant upheaval in people's lives, especially for children (Stassart et al., 2021). The educational process took place at home, online classes replaced face-to-face education and, as a result, all face-to-face contact between teachers and pupils came to an end, which was a cause for concern worldwide (UNESCO, 2022).

However, the lockdown also provided a unique opportunity to study how communicating almost exclusively through ICT affected social relationships among children. Therefore, the objective of the current study was to find out the impact of lockdown on cyberhate and to analyse the protective factor of the social, emotional and moral competencies among children in Primary Education. Fortunately, the basis of this study also involved discovering the relationship between social and emotional competencies and antisocial online behaviour, of which cyberhate is one of the most recent, worrying forms (Hawdon et al., 2017; Keipi et al., 2018).

The longitudinal results of the study show an increase in cyberhate after five months of lockdown among Primary Education pupils, thus validating Hypothesis 1. This research therefore supports the assumption that the Internet and, in particular, social networks are a setting in which the general population usually encounters hate speech. During lockdown, the Internet use skyrocketed to hitherto unknown levels (UNESCO, 2020). In line with previous research (Wright et al., 2021), the longitudinal nature of this research has been able to verify that during lockdown, cyberhate also increased, both in its level of perpetration and the extent of its propagation.

In order to facilitate the design of new strategies to prevent cyberhate, it is vital to detect risk and protection factors which can help to protect children and adolescents and contribute positive effects to this population. In this study we have sought to discover, in addition to the impact of the COVID-19 lockdown on cyberhate in children in Primary Education in Ecuador, the role of social, emotional, and moral competencies as a protective factor against cyberhate. As can be seen in the results of this research, cyberhate, together with its dimensions of perpetration and propagation, could be predicted after five months of lockdown for being male, being in the highest school year, attending a state school, and for obtaining low scores in social, emotional, and moral competencies, in particular in moral emotions. The effects of lockdown have highlighted the importance of face-to-face social relationships and, possibly, the importance of school in the development of social, emotional, and moral competencies.

Male pupils seem to be more likely to engage in cyberhate than their female counterparts, as has already been found in the case of other types of antisocial behaviour and online behaviour (Bachman et al., 2008; Jaggers et al., 2016; Jolliffe & Farrington, 2006; Shollenberger, 2015). These results show the need for training at school to address these differences by gender and to facilitate prevention and educational intervention.

The pupils in the highest school year, of the two groups that participated in this research, generated more cyberhate than the lower year. To an extent, this is logical, if we consider that older pupils have more access to devices and better-developed ICT skills and so can engage in cyberhate more effectively. In turn, this finding is in line with studies on the development of antisocial behaviour, which show that they increase from childhood to adolescence (Farrington, 2020).

State schools are also a setting in which cyberhate is more prevalent than in private schools. This may be due to the more limited socio-educational and economic resources available to state schools in Ecuador, and in Latin America in general, compared to private schools, which can constitute a serious obstacle to academic progress. Thus, a state school population made up of educational communities with a lower average income than their counterparts in private schools, together with the greater socioeconomic and ethnic-cultural diversity, may account for the more serious educational obstacles encountered in state schools. In addition, the idea of working in state schools appears to be less attractive to teachers (Delprato

& Antequera, 2021). All of these factors in state schools must be taken into account when preparing to design different educational initiatives to promote equality, coexistence, and positive, non-violent social relations, and to prevent cyberhate and other forms of antisocial behaviour.

Moral emotions are also a recurring factor in the cross-sectional and longitudinal prediction of cyberhate, which partly validates Hypothesis 2. These results are in line with previous studies on the predictive role of social, emotional and moral competencies in other types of antisocial behaviour (Gaffney et al., 2019; Mazzone et al., 2018). These findings also encourage perseverance in the goal of developing social, emotional, and moral competencies in the general public, and promote their better development in the curriculum from Primary Education onwards.

This study has several limitations. Firstly, the sample, although large, is not representative. Another limitation is the use of self-reports, which, in future research, should be complemented with other types of instruments. A further limitation is the difference in procedures used for the two rounds of data collection (one face-to-face and the second, due to lockdown, online): here, several reliability indices for certain dimensions indicate that we should be cautious in drawing conclusions. The second round of data collection was carried out during lockdown, firstly, because we aimed to learn how cyberhate had evolved over the same school year and secondly, to collect the data, where possible, in full lockdown conditions, without extraneous variables such as the end of year holidays, especially since nobody could tell exactly how long lockdown would last.

Despite these considerations, the study gives us a genuine insight into the impact of the COVID-19 lockdown on cyberhate in primary school children from a longitudinal perspective. This research has also highlighted the role played by social, emotional, and moral competencies in preventing cyberhate. In the light of these results, we would recommend that all interventions to prevent and reduce cyberhate prioritise the promotion of social, emotional, and moral competencies, with special emphasis on the moral elements, and with particular attention to male pupils, while at the same time assessing the socio-cultural factors mentioned above. Education, specifically in schools, plays a key role in fostering gender equality, since any sociocultural differences in family, social, and non-formal education between male and female pupils could be reduced through training promoting social, emotional, and moral competencies, which in turn, help to check antisocial behaviour such as cyberhate. It is therefore essential to continue striving to achieve a comprehensive education among the general public, starting at the initial stages of formal education, to nurture the social, emotional, and moral sphere of each individual and thus help society to progress towards greater equality, coexistence, and respect for diversity.

Authors' Contribution

Idea: V.J.LL.; Literature review (state of the art): V.J.LL., C.S.M., X.V.C.; Methodology: V.J.LL., C.S.M; Data collection: C.S.M.; Data analysis: V.J.LL., C.S.M., X.V.C.; Results: V.J.LL., C.S.M., X.V.C.; Discussion and conclusions: V.J.LL., C.S.M.; Writing (original draft): V.J.LL., C.S.M.; Final revisions: V.J.LL., C.S.M., X.V.C.; Project design and sponsorships: V.J.LL., C.S.M., X.V.C.

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