

Special issue: Child protection in the digital age. Latent profiles in cyberbullying and the relationship with self-concept and achievement goals in preadolescence

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Abstract

In recent years, the scientific community has taken an interest in cyberbullying research due to the emotional and educational impact on all those involved. However, the scant evidence on samples from primary education is derived from statistical methodologies focusing on the individual, which generate specific profiles rather than acting roles. The present study focuses on the profiles of cyberbullying and its variability with the levels of self-concept and academic goals, using a sample of 548 Spanish primary education students aged 10–13 ($M = 10.95$, $SD = 0.7$). After analysing the data using Latent Class Analysis and MANOVA, the profiles developed were ‘not-involved’ (38.82%), ‘moderate victimization’ (37.17%), ‘high bully-victimization’ (19.29%) and ‘low victimization’ (4.7%). In addition, the group of students with the not-involved profile scored higher on the self-concept of their relationship with their parents, in language, in mathematics and their general self-concept than the group with moderate victimization. The same pattern was also observed for learning goals. The findings have significant implications for the creation of person-centred cyberbullying prevention programmes that permit a more targeted approach to cyberbullying behaviours in order to halt its progress.

KEYWORDS

academic goals, cyberbullying, latent class analysis, primary education, self-concept

1 | INTRODUCTION

The widespread use of the Internet by children and adolescents has transformed access to information, leisure, entertainment, communication and several other domains. However, while the Internet provides many benefits to its users, it also poses some risks (Calvete et al., 2021). Cyberbullying behaviours in childhood and adolescence have become a global concern in mental health, education and related public policy (Modecki et al., 2014), as one of the most common psychosocial problems in childhood and adolescence (Calmaestra

et al., 2016), with prevalence ranging between 6% and 72% (Chen & Zhu, 2022; Delgado & Escortell, 2018; González-Cabrera, Sánchez-Álvarez, et al., 2019; Selkie et al., 2016), and an increasingly earlier onset. Patchin and Hinduja (2022) analysed a sample of 1034 preadolescents aged 9 to 12 and discovered that one in every five students had been exposed to cyberbullying as a victim, bully or bystander.

If traditional bullying has immediate and long-term negative consequences for its participants, cyberbullying has been found to be more stressful and have more severe consequences for everyone involved (Buelga et al., 2019; Hellfeldt et al., 2019). Higher levels of

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school and social anxiety, depression, self-esteem issues, poorer academic performance and achievement of academic goals, school refusal, substance use and even suicidal ideation are among them (Buelga et al., 2022; Chen et al., 2020; Delgado et al., 2019; Escortell et al., 2020; Rodríguez-Enríquez et al., 2019).

Given its gravity, the phenomenon has received increased social and investigative attention in recent decades and yet remains a topic of great interest in the scientific community (Guo et al., 2021).

1.1 | Participant roles in cyberbullying

Previous authors have established various classifications of participation roles, the most basic of which are victims, bullies, bystanders and victimized bullies (Garaigordobil, 2015). However, there has been some debate about the assignment of these roles because they are the result of cut-off points on statistical distributions based on which participants are assigned to one of these roles (Kokkinos et al., 2014) rather than being a person-centred analytical approach. Cluster analysis and latent class analysis (LCA) or latent profile analysis (LPA) allow the formation of different groups based on the actual participation of those involved, as well as members of the same group who have similar experiences, resulting in a more concrete and specific approach (Martínez-Monteaudo et al., 2020).

Schultze-Krumbholz and Scheithauer (2015) applied LCA to a sample of 6260 students from six countries ranging from 11 to 23 years in age and established three groups of participants, specifically 'not involved' (70.1%), 'victimized bullies' (26.1%) and 'aggressor with mild victimization' (4%). Similarly, Hollá (2016) used LCA to analyse a sample of 1629 students from Slovakia (11–18 years old), highlighting distinct profiles, the three most prevalent of which was 'not involved' (52.9%), followed by 'victims' (42.7%) and 'victimized bullies' (4.4%). In this vein, Antoniadou et al. (2019) examined the data of 1097 Greek students aged 12 to 15 years and discovered four latent profiles (LPA) of bullying and cyberbullying: 'not involved' (75%), 'victimized bullies' (11.2%), 'bullies' (8.2%) and 'victims' (5.6%).

Liu et al. (2020) recently discovered significant results, after analysing a representative sample of 12 642 American students aged 11 to 17 years, and established four participation profiles, with the 'not involved' profile dominating at 59%. In addition, LPA revealed three more profiles: 'moderate victims' (27.2%), 'severe victimized bullies' (7%) and 'moderate aggressors' (6.9%). Ding et al. (2020) identified three participation profiles by analysing 1529 Chinese students (12–19 years old). The majority group was the profile 'not involved' (92%), followed by 'high victimized bullies' (6%) and 'cyberbullies-victimized' (2%). In addition, Martínez-Monteaudo et al. (2020) discovered three profiles in 1412 students aged 12 to 18 years old using LCA, highlighting the profile of 'not involved' (42.7%), followed by that of 'bully-victims' (30.02%) and that of 'rarely victim and bully' (27.26%).

As can be seen, the bulk of previous evidence focuses on secondary or joint primary and secondary school samples. However, although scarce in comparison, some relevant data with a unitary sample of primary education have been collected in scientific literature. Kim et al.

(2020) used LPA to examine 375 Korean preadolescents (10–11 years old) and indicated four groups based on the likelihood of perpetration and victimization in bullying and cyberbullying, with 85.3% belonging to the 'low risk' group, followed by the 'online risk' (7.2%), 'offline risk' (5.1%) and 'high risk' (2.4%). The study by Huang et al. (2022) with a sample of 4321 Chinese students aged 8 to 12 years old is also significant. After analysing the changes in the participation profiles at three time points, they found the profiles that remained stable were those of 'not involved' (82.4%), 'traditional victims' (10.8%), 'victimized bullies' (5%) and 'cyberbully-victims' (1.8%), with the profile of 'cyber victims' exclusive of the first two times of the analysis.

Previous research has also focused on the specific profiles of cyberbullying observers. Schultze-Krumbholz et al. (2018) discovered that the prosocial defender (52.2%) was the most prevalent profile in a sample of 849 German students (11–17 years old), followed by the one who communicates the harassment to the rest (28.4%), the aggressive defender (9.5%), the victimized aggressor (7.1%) and the assistants (2.8%). Similarly, Hong and Lee (2022) discovered five distinct profiles of observers after analysing 566 12-year-old adolescents with LPA (limited bystanders, pro-bullies, outsiders, defenders and inconsistent bystanders). Table 1 summarizes the research literature that was examined.

1.2 | Cyberbullying, self-concept and achievement goals

Cyberbullying is a phenomena that has spread beyond school walls, impacting kids mentally, emotionally and intellectually (Delgado & Escortell, 2018; González-Cabrera et al., 2022; González-Cabrera, Machimbarrena, et al., 2019). Self-concept can be characterized as a set of hierarchically ordered views that each individual owns, based on their experience and relationships with the environment, and which are influenced by the support and assessments of significant others (Shavelson et al., 1976). The relationship between self-concept and cyberbullying behaviours is especially pertinent because it is a factor of high explanatory and consequential impact. In this context, Delgado et al. (2019), using a sample of 548 Spanish students aged 10 to 12, demonstrated that academic self-concept (self-concept in the language subject), general and social self-concept (relationship with parents and classmates) explain the role of a cyber-victim. This negative association between cybervictimization and self-concept is supported by the majority of prior research (Escortell et al., 2020; Estévez et al., 2020; Romero-Abrio et al., 2019). It has also been demonstrated that participation in cyberbullying has detrimental effects on self-concept in any of the roles (Brewer & Kerslake, 2015; Estévez et al., 2020; Navarro et al., 2015; Ortega-Barón et al., 2016; Özdemir, 2014) and that early adolescents already construct their concept of "self" through their interactions with the online world (Ortega-Barón et al., 2020).

Academic goals are considered as a model or pattern of beliefs, attributions and/or emotions that influence behavioural intentions (Weiner, 2004). Consequently, it is a variable that connects the intellectual and social spheres (Herrera et al., 2016). Prior research

TABLE 1 Summary of the studies reviewed.

Authors	Country	Subjects	Method	Results
Schultze-Krumblolz and Scheithauer (2015)	Poland, Spain, Italy, United Kingdom, Germany and Greece.	6260 students (11–23 years old)	LCA	70.1% not involved, 26.1% victimized bullies, 4% aggressor with mild victimization.
Hollá (2016)	Slovakia	1619 students (11–18 years old)	LCA	52.9% not-involved, 42.7% victims, 4.4% victimized bullies.
Schultze-Krumholz et al. (2018)	Germany	849 students (11–17 years old)	LCA	52.2% prosocial defenders, 28.4% communicating outsiders, 9.5% aggressive defenders, 7.1% victimized aggressor, 2.8% assistants.
Antoniadou et al. (2019)	Greece	1097 students (12–15 years old)	LPA	75% not involved, 11.2% victimized bullies, 8.2% bullies and 5.6% victims.
Liu et al. (2020)	USA	12 642 students (11–17 years old)	LGA	59% not involved, 27.2% moderate victims, 7% severe victimized-bullies and 6.9% moderate aggressors.
Ding et al. (2020)	China	1529 students (12–19 years old)	LPA	92% not involved, 6% high victimized bullies and 2% cyberbullies-victimised.
Martínez-Monteagudo et al. (2020)	Spain	1412 students (12–18 years old)	LCA	42.7% not involved, 30% bully-victims, 27.26% rarely victims and bullies.
Kim et al. (2020)	Korea	375 students (10–11 years old)	LPA	85.3% low risk, 7.2% online risk, 5.1% offline risk, 2.4% high risk.
Huang et al. (2022)	China	4321 students (8–12 years old)	LPA	82.4% not involved, 10.8% traditional victims, 5% victimized bullies, 1.8% cyberbully-victims.
Hong and Lee (2022)	South Korea	566 students (12 years old)	LPA	Limited bystanders, pro-bullies, outsiders, defenders and inconsistent bystanders.

regarding its association with cyberbullying is scarce. Nevertheless, it has been demonstrated that bullies are more driven by goals of reinforcement and social support (Romera et al., 2016), despite their weak social competence (Zych et al., 2019). The study conducted by Delgado et al. (2019) on a sample of primary education pupils' merits special note. Through a logistic regression analysis, they demonstrated that learning goals operate as an explanatory factor for the victim role, whereas social goals better explain the bully and bystander roles. Therefore, the research demonstrates that adolescents participating in cyberbullying incidents (victims, bullies or bully-victims) exhibit poorer levels of self-concept, achievement and social aspirations.

It should be highlighted that the literature is inconclusive regarding the impact of participation profiles on psychological and school variables such as self-concept and academic aspirations. This is likely owing to the various conceptualizations of cyberbullying, as well as the variation in methodology or the frequency value utilized as the cut-off point in bullying questionnaires (Martínez-Monteagudo et al., 2020). Similarly, most studies employ a combined bullying and cyberbullying score, disregarding the diversity of each kind (Ding et al., 2020). In addition, the characteristics of cognitive and emotional development are not the same in primary as in secondary levels of education (Isorna et al., 2013), making it necessary to use unitary samples of primary education, rather than mixed samples of primary and secondary, in order to bring in greater clarity to offer greater clarity on the phenomenon's functioning and develop interventions aimed at the effective prevention of cyberbullying.

1.3 | The present study

Derived from this background, our research has two objectives. First, using a sample of Spanish early adolescents, we intend to determine whether combinations of different cyberbullying roles lead to discrete profiles, which are defined by a greater or lesser weighting of each cyberbullying dimension (victimization and aggressiveness), and, second, to examine the variances in self-concept and achievement goals based on diverse cyberbullying profiles. Based on earlier research conducted with the adolescent population and developed throughout the previous paragraph, the following hypotheses were developed:

Hypothesis H1: The following cyberbullying profiles are expected to be found: (1) victims (high scores on victimization and low scores on aggression and aggression-victimization), (2) bullies (high scores on aggression and low scores on victimization and aggression-victimization), (3) bully-victims (high scores on aggression-victimization and low scores on victimization and aggression) and (4) not involved (low scores on aggression, victimization and aggression-victimization).

Hypothesis H2: It is anticipated that the group with high victimization scores and low aggression levels, as well as the group with mostly high victimization and

aggression scores, will have lower self-concept and achievement goals than the other groups.

2 | METHODS

2.1 | Sample

Students in the 5th and 6th grades of primary education in the province of Alicante, Spain, constituted the sample population. The province's 108 002 students enrolled in Primary Education were sampled by cluster sampling. Subsequently, four public and two private centres with a total of 558 students were selected using simple random sampling, of which six were removed due to errors or omissions in their responses and four whose parents did not offer consent. The final sample analysed consisted of 548 students between the ages of 10 and 13 ($M = 10.95$, $SD = 0.7$), with 275 boys (50.2% of the sample) and 273 girls (49.8% of the sample); 276 (50.4%) children were enrolled in the 5th grade of primary education and 272 (49.6%) in the 6th grade.

The χ^2 test was used to determine the homogeneity of the sample according to gender and grade, and no statistically significant differences were found between the four groups of Gender X Grade ($\chi^2 = 2.50$, $p = 0.11$).

2.2 | Instruments

2.2.1 | Cyberbullying: Screening of harassment among peers

The scale developed by Garaigordobil (2013) is a self-report that evaluates 15 electronic harassment behaviours (such as sending offensive and insulting messages, making offensive calls, posting offensive photos or videos on YouTube and making anonymous calls to frighten, blackmail or threaten) in order to identify victims, bullies and bystanders (it also measures bullying behaviours, although this option was not considered in the present study). The questionnaire contains 45 items that must be answered on a 4-point Likert scale ranging from 0 (*never*) to 3 (*always*). The answer method is triangular, since the evaluator must identify whether the participants have experienced bullying as a victim, perpetrated it as aggressor or seen it or been aware of its existence (observer) within the past year.

Psychometric investigations conducted by the original authors confirmed the sufficient internal consistency of the test ($\alpha = 0.91$) and a three-factor structure (victim, bully and bystander) that accounts for 40.15% of the variation (Garaigordobil et al., 2014). Furthermore, numerous papers support the instrument's dependability and validity (Garaigordobil, 2015, 2017). In the present study, only the cyberbullying and cybervictimization subscales were used. The internal consistency indices of the subscales were adequate: victim ($\alpha = 0.94$; McDonald's Omega = 0.92) and bully ($\alpha = 0.96$; McDonald's Omega = 0.93).

2.2.2 | Self-concept: Self-Description Questionnaire I

Self-Description Questionnaire I (SDQ-I) (Marsh, 1986) is an instrument designed to assess the multidimensional self-concept of children aged 7 to 12 years. It consists of 76 response items of the Likert type, ranging from 0 (*no*) to 4 (*yes*) and distributed across seven subscales: physical ability (a person's perception of their own athletic abilities), physical appearance (personal schema of aesthetic characteristics and beauty), relationship with peers (self-image of popularity and social behaviours), relationship with parents (the individual's perception of their interactions with parents) general self-concept, language self-concept (schema as a student of language) and mathematical self-concept (schema as a student of mathematics).

Marsh (1986) created the instrument based on the multidimensional and hierarchical model of self-concept proposed by Shavelson et al. (1976). The Spanish adaption was standardized by González et al. (1994) using a sample of 674 pupils in the 5th grade of primary education, obtaining adequate reliability indices ($\alpha = 0.90$). In the present study, Cronbach's alpha internal consistency coefficients fluctuated between $\alpha = 0.82$ (Mathematical self-concept) and $\alpha = 0.71$ (General self-concept) and McDonald's Omega between $\alpha = 0.80$ (Mathematical self-concept) and $\alpha = 0.70$ (General self-concept).

2.2.3 | Academic goals: Achievement Goals Tendencies Questionnaire

Achievement Goals Tendencies Questionnaire (AGQT) (Hayamizu & Weiner, 1991) is a 20-item self-report instrument focused on measuring academic goals through three subscales: learning goals (studying to learn and acquire knowledge and master the task), achievement goals (studying to obtain good results and advance) and social reinforcement goals (studying to obtain the approval of parents, teachers and peers). Each question is answered using a 5-point Likert scale (1 = *never*, 5 = *always*).

In the original exploratory factor analysis conducted by Hayamizu and Weiner (1991), the three components accounted for 52.4% of the total variance. In addition, the internal consistency of the subscale was adequate ($\alpha = 0.71$ –0.89). In a Spanish teenage population, Inglés et al. (2011) verified the factorial invariance of gender and academic grade results. In this study, the internal consistency indices for the subscale scores were as follows: $\alpha = 0.71$ and $\omega = 0.69$ (learning objectives), $\alpha = 0.73$ and $\omega = 0.72$ (social reinforcement goals) and $\alpha = 0.93$ and $\omega = 0.90$ (achievement goals).

2.3 | Procedure

Researchers initially met with the management teams of the selected facilities to explain the goal of the study. A letter was then addressed to the parents of the minors informing them about the study and requesting their consent in writing. During a class session, the surveys

No. of classes	BIC	AIC	Entropy	Number of parameters
2	363.466	326.99	0.999	9
3	194.231	137.501	0.977	14
4	46.889	-30.101	0.963	19
5	-35.421	-132.672	0.893	24
6	-119.574	-237.084	0.894	29

TABLE 2 Fit indices of the latent class analysis (LCA).

Note: Values that are highlighted in bold reflect the optimal model fit.

Abbreviations: AIC, Akaike information criterion; BIC, Bayesian information criterion.

were answered collectively and voluntarily in the classrooms, ensuring the anonymity of the participants. For this purpose, identification numbers were previously assigned to each participant's response sheet. During the presentation of the exams, the researchers were present to clarify any questions and verify the accurate completion of the questionnaires, which were completed in an average of 15 min each. The study was approved by the University Ethics Committee. All human research guidelines were followed, in accordance with the Helsinki Declaration's ethical principles (World Medical Association, 2013).

2.4 | Statistical analysis

LCA was used to identify the distinct cyberbullying profiles. These profiles were established based on the aggregate scores of the distinct behaviours of victimization and aggression in the form of cyberbullying. Based on the profile presented by the students, they were included in one of these classes. The determination of the number of classes needed for a better representation of the data was carried out using the lowest indicator of the Bayesian information criteria (BIC) and the Akaike information criterion (AIC) and the value closest to the one for entropy (Schreiber, 2017) as the adjustment indices. MANOVAs were performed to verify whether or not differences existed in self-concept and achievement goals between the distinct groups, and the post hoc Bonferroni test was used to determine which groups presented statistically significant differences. Finally, Cohen's *d* (standardized difference between means) (Cohen, 1988) was used to assess the magnitude of said differences. Its interpretation is as follows: $0.20 \leq d \leq 0.50$, suggests a small effect size, $0.51 \leq d \leq 0.79$ is moderate and $d \geq 0.80$ is a large effect size. The XLSTAT version 2021 and IBM SPSS Statistics v28.0 programs were used for conduct LCA and MANOVAs, respectively.

3 | RESULTS

3.1 | Cyberbullying profiles

LCA was used, taking into account the scores of the cyberbullying behaviours: victimization and aggression. As seen in Table 2, the class obtaining the best fit for the BIC, AIC and entropy indicators was that consisting of four profiles. The first profile, non-cyberbullying, consisted of a total of 213 students (38.82%) having very low scores on the

subscales of victimization (range of scores = 0–28) and aggression (range of scores = 0–30), was identified as 'not involved'. The second profile, moderate cyberbullying, with 203 students (37.17%) having moderate levels of victimization (range of scores = 0–33), designated as 'moderate victimization'. The third profile, high cyberbullying, consisting of 106 students (19.29%), had high scores on the two analysed subscales of cyberbullying (range of scores for victimization = 0–34 and range of scores for aggression = 0–39), categorized as 'high bully-victimization'. The fourth and last profile, with 26 students (4.72%) having low levels of victimization (range of scores = 0–30), was identified as 'low victimization'. Figure 1 shows the LCA solution including the *z* scores for victimization and aggression.

3.2 | Inter-group differences in self-concept and achievement goals

The results of the MANOVAs comparing each component of self-concept and achievement goals across the four cyberbullying profiles are presented in Table 3. Four self-concept variables (relationship with parents, academic self-concept for language, academic self-concept for mathematics and general self-concept) and one of the goal orientations (learning goals) exhibit statistically significant variations.

Specifically, the group of students not involved in cyberbullying behaviours ('non-involved') showed considerably more learning goals than the 'moderate victimization' profile ($p = 0.045$, $d = 0.20$). In addition, the group of students who were not involved in cyberbullying situations ('non-involved') had a significantly higher social self-concept in relation to their parents ($p = 0.004$, $d = 0.39$), a better academic self-image with regards to performance in the subjects of language ($p = 0.042$, $d = 0.28$) and mathematics ($p = 0.012$, $d = 0.34$) and a higher general self-concept ($p = 0.029$, $d = 0.31$) in comparison to the 'moderate victimization' profile. In all cases, the effect sizes for the observed differences were minor ($d < 0.50$). Furthermore, the remaining differences between profiles were insignificant. All other comparisons were not statistically significant.

4 | DISCUSSION

The objectives of the present study were, on the one hand, to determine if combinations of victimization and aggression behaviours in

FIGURE 1 Graphic representation of the LCA solution.

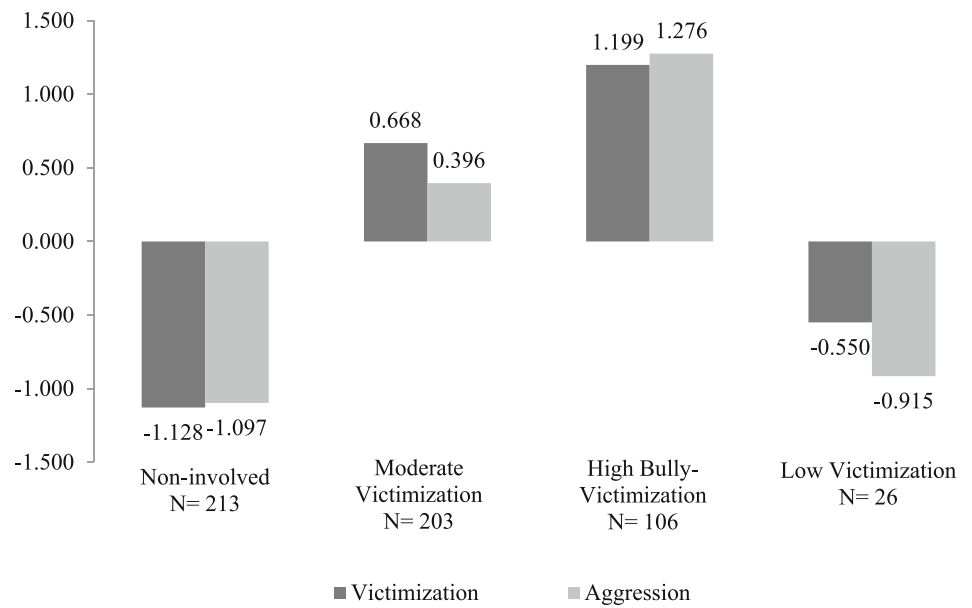


TABLE 3 Means and standard deviations of the cyberbullying between classes and statistical significance.

	Non-involved (n = 213)		Moderate victimization (n = 203)		High bully-victimization (n = 106)		Low victimization (n = 26)		F	p	η ²
	M	SD	M	SD	M	SD	M	SD			
Learning goals	>22.26	>5.47	20.81	6.53	21.59	6.20	21.70	6.90	>2.71	>0.046*	0.020
Social reinforcement goals	>15.16	>5.79	14.94	5.32	14.54	5.85	17.30	4.60	>1.34	>0.260	0.009
Performance goals	>18.07	>6.65	16.05	7.95	17.19	7.46	17.05	8.00	>2.01	>0.113	0.014
Physical ability	>22.23	>7.40	21.30	7.27	21.95	7.64	21.35	8.41	>.45	>0.712	0.003
Physical appearance	>21.05	>6.30	19.79	6.98	20.90	6.56	22.05	7.47	1.39	0.246	0.010
Relationship with colleagues	>22.00	>7.54	20.06	8.20	21.90	8.11	21.55	9.31	1.85	0.138	0.013
Relationship with parents	>24.94	>6.70	22.05	8.22	24.25	7.95	23.45	7.98	4.09	0.007*	0.028
Language	>19.92	>5.68	18.20	6.92	18.95	6.32	18.85	6.58	3.31	0.022*	0.024
Math	>19.32	>7.38	16.71	8.05	19.20	7.49	18.00	6.05	3.67	0.012*	0.025
General self-concept	>25.09	>4.45	23.60	5.39	24.69	5.03	25.25	5.72	2.65	0.048*	0.019

*p < 0.05.

cyberbullying produce differentiated profiles in early adolescence (10 to 12 years old) and, on the other hand, to examine differences in self-concept and achievement goals among the student profiles.

In partial agreement with the first hypothesis, according to which it was expected to find four groups based on traditional participation roles (victims, bullies, bullies-victims and not-involved), the present study's findings do not fully conform to what has been previously established. Specifically, a predominant profile of early adolescents 'not involved' in cyberbullying is established (38.82%), with low scores in victimization and aggression, closely followed by the profile of 'moderate victimization' (37.17%), a third group with high scores in aggression and victimization or 'high bully-victimization' (19.29%) and a final profile of 'low victimization' (4.72%), leaving the role of 'pure' bully

unrepresented in the study sample. This evidence is consistent with prior research (Hollá, 2016; Schultze-Krumbholz & Scheithauer, 2015) with LCA in which the aggressor role was not a representative profile, as opposed to the victimized bully role. These results may be attributable to the fact that early adolescence is when children begin to have their first contact with information and communication technologies (ICT), specifically social networks, and when they are victimized, they may come to normalize bullying behaviours in a certain way, even considering them as habitual forms of communication (Cuadrado-Gordillo & Fernández-Antelo, 2016; Martín Montilla et al., 2016), leading them to experience both profiles later on.

Noteworthy is the variance in composition and proportion of subjects represented in each profile. Thus, despite the fact that the

majority of earlier studies have highlighted the prevalence of the 'not involved' profile, the prevalence found in the present study is lower than that found previously (Antoniadou et al., 2019; Ding et al., 2020; Huang et al., 2022; Liu et al., 2020; Martínez-Monteagudo et al., 2020). This discrepancy may be attributable to the fact that most research evaluate bullying and cyberbullying together, suggesting that involvement rates increase when the cyberbullying phenomena is investigated heterogeneously. This finding may also be due to the very nature of social networks, which facilitate permanent connectivity, overcoming spatial barriers and making the harasser feel immune and protected behind a screen (Escortell et al., 2020; Ortega-Barón et al., 2019), so their participation is facilitated in electronic environment. This increases the importance of digital health interventions, whose effectiveness has been demonstrated (Chen et al., 2022). In addition, the victim role was well represented in the 'moderate victimization' profile (37.17%) but less so in the 'low victimization' group (4.72%). Despite the fact that certain studies with person-centred analytical approaches failed to detect these profiles (Ding et al., 2020; Huang et al., 2022; Schultze-Krumbholz & Scheithauer, 2015), others have identified them as sample-representative groups (Liu et al., 2020; Martínez-Monteagudo et al., 2020). According to Smahel et al. (2020), this effect is likely owing to children aged 9 and over using their smartphones daily to access the Internet and social media. This digital environment is particularly appealing to early adolescents who, in the majority of cases, access it without adult supervision and learn by trial and error (Vanderhoven et al., 2014), without being taught to recognize the countless risks they may be exposed to (Tejada et al., 2019). Lastly, highlighting the 'high bully-victimization' profile with a participation rate higher than that of the majority of previous research (Antoniadou et al., 2019; Ding et al., 2020; Hollá, 2016; Huang et al., 2022; Liu et al., 2020), an effect that, along with the absence of representation of the 'pure' bully role, suggests that perhaps preadolescents do not have an initial desire to harass. Specifically, the desire for retribution may motivate children to use ICTs to frighten others as a reaction to the same cybervictimization they have experienced (Betts et al., 2017), with the concomitant increase in cyberbullying perpetration and victimization behaviours.

In response to the second hypothesis, which posited an effect on self-concept and academic goals in groups with the highest victimization and aggression-victimized groups, differences were found in the scores of learning goals, social self-concept, academic self-concept and general self-concept. Consequently, the 'not involved' profile had significant higher scores in the aforementioned dimensions as opposed to the 'moderate victimization' profile, which suggests that victims of cyberbullying experience greater consequences at the psychosocial and school levels, partially confirming the hypothesis. In this regard, preadolescents who suffer bullying through ICTs are less oriented towards studies for the pleasure of learning, which is consistent with previous studies such as Delgado et al. (2019), who showed that learning goals are related to the role of cyber victim or the bulk of previous evidence that supports low academic performance in victims of cyberbullying (Garaigordobil, 2015; Giménez-Gualdo et al., 2014). This effect may be due to the fact that the bullying experiences disconnect them from their

responsibilities, thus losing the motivation to learn or study but for the simple outcome of passing examinations and not being reprimanded (Romera et al., 2016). Yet the impact size of these differences was very small ($d = 0.20$), indicating that these differences are not as prominent in students in primary schools but rather represent a tendency that persists until they reach secondary school. Thus, these findings are equally useful for cyberbullying prevention initiatives. In the same way, the victims of cyberbullying presented a lower self-concept of relationship with parents, academic self-concept and general self-concept, compared to the 'not involved' profile, which is consistent with previous studies that supported the relationship between the academic dimensions (Brewer & Kerslake, 2015; Escortell et al., 2020; Ortega-Barón et al., 2016), family (Delgado et al., 2019; Navarro et al., 2015; Ortega-Barón et al., 2016) and general (Delgado et al., 2019; Escortell et al., 2020; Özdemir, 2014) self-concept with the role of victim. As observed, victimization makes preadolescents value themselves less through their parent-child relationships, probably due to the perceived lack of protection when receiving attacks (Bjereld et al., 2015; Seo et al., 2017), for fear of being reprimanded (Samper-García et al., 2015), because this online victimization derives from situations of family poly-victimization (Chen et al., 2018) or because parents are unaware of the victimization that their children experience, increasing the feeling of loneliness in the victims (Buelga et al., 2016; Nocentini et al., 2019). In the same way, in the academic context, their self-assessment is also affected, probably due to the poorer school adjustment engendered by victimization (Garaigordobil, 2015; Ortega-Barón et al., 2016) or because, although cyberbullying can occur in places other than school, in most cases, the victims are harassed by their own classmates (Calmaestra et al., 2016; Smith et al., 2008).

In short, it is observed that for the study sample, negative self-perceptions are a consequence of victimization although, as previous studies (Delgado et al., 2019; Escortell et al., 2020) show, this negative self-assessment during preadolescence can become at risk factor also to be victimized, as they are considered easy targets for bullies. Moreover, the effort needed to compensate for the consequences of low self-concept, together with the virality and loss of control over harmful content uploaded to the network (Ortega-Barón et al., 2019), as well as the need for revenge, makes these minors more likely to become victimized-aggressors (Betts et al., 2017), resulting in a representative profile of preadolescence, as evidenced in the study sample. In addition, at the academic level and in the words of Miñano et al. (2012), the dimensions of self-concept and learning goals are related to academic adjustment, which makes victims produce a lower performance (Garaigordobil, 2015). Finally, the influence of the relationship with parents on online victimization is evident, which encourages the inclusion of parents in intervention programmes, especially taking into account the evidence shown regarding its effectiveness (Chen et al., 2020).

There are some limitations to this study that should be considered when conducting future research. First and foremost, the sample size is a limitation because the results are not generalizable to students of other educational levels (secondary education levels or higher). Second, because this is a cross-sectional study, causal relationships cannot be established; therefore, longitudinal studies with an

experimental design should be conducted in the future. In addition, it is important to note that the study does not examine gender and grade/age differences, which could provide valuable and more specific information about cyberbullying profiles. As a result, it is critical that future studies address this premise. Finally, it should be noted that the observed differences are not supported by consistent effect sizes ($d < 0.50$; Cohen, 1988). As a result, it is critical to use caution and precision when interpreting the results, as the magnitude of the differences is insufficient to be considered scientific evidence. In the research of cyberbullying, however, it gives transcending theoretical-practical knowledge because it forewarns of prospective effects that have been confirmed in later stages. In order to avoid eventual psychosocial and school effects, it is crucial to pay close attention to this evidence, which can be of tremendous aid in working with profiles in the early phases of participation.

5 | CONCLUSIONS

This research contributes significantly to the literature on cyberbullying, as well as to the theoretical-practical implementation aimed at its prevention development. First, it focuses on a sample of preadolescents (10–12 years old), providing new information compared to the bulk of the scientific literature that focuses on secondary education students. Given the findings of this study, it is essential to direct attention to the primary stages in which minors begin to have contact with ICTs, in order to guarantee good educational outcomes and mental well-being by avoiding these situations. Furthermore, it uses a person-centred analytical approach, LCA, which makes it possible to overcome the arbitrariness of the different types of cut-off points and categories established in each evaluation instrument. All this provides valuable information regarding the grouping of preadolescents into four cyberbullying profiles based on the frequency of participation (not involved, moderate victimization, bully-victimization and low victimization) and not on roles, as has traditionally been done.

With regard to the most significant findings, it is important to highlight that while the 'not involved' profile has represented lower percentages compared to previous studies, the 'moderate victimization' profile has increased, an effect that confirms that minors are harassed through of ICT at an early age. In addition, it is this group that presents most of the disabling symptoms of social, academic, general self-concept and learning goals. In the same way, a percentage of 19.29% of 'bully-victimization' has been determined, without the presence of a 'pure' bully profile, which suggests that perhaps at these ages, when minors are victimized, they hide behind the anonymity that ICTs facilitate to take revenge for the attacks received, and the acting roles end up overlapping.

This evidence is of great value in terms of prevention and intervention in the psychoeducational area in the last years of primary education, in order to improve the characterization of classes or profiles for cyberbullying, thus favouring the reduction of the risk of participation in cyberbullying. In the same way, having a psychosocial and school profile of victims allows clear outlining of the course of action, with the aim of giving a prioritized response to the discomfort, and

psychosocial and school maladjustment of those involved. In this scenario, despite the small magnitude of the variations, it is important to identify cyberbullying profiles in order to address a growing problem in the lives of young people.

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CONFLICT OF INTEREST

The authors declare no conflict of interest.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

ETHICS STATEMENT

Parents of the minor participants provided informed consent in writing. The study was approved by the University ethics committee. All human research guidelines were followed, in accordance with the Helsinki Declaration's ethical principles (World Medical Association, 2013).

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REFERENCES

- Antoniadou, N., Kokkinos, C. M., & Fanti, K. A. (2019). Traditional and cyber bullying/victimization among adolescents: Examining their psychosocial profile through latent profile analysis. *International Journal of Bullying Prevention*, 1(2), 85–98. <https://doi.org/10.1007/s42380-019-00010-0>
- Betts, L. R., Gkimitzoudis, A., Spenser, K. A., & Baguley, T. (2017). Examining the roles young people fulfill in five types of cyber bullying. *Journal of Social and Personal Relationships*, 34(7), 1080–1098. <https://doi.org/10.1177/0265407516668585>
- Bjereld, Y., Daneback, K., & Petzold, M. (2015). Differences in prevalence of bullying victimization between native and immigrant children in the Nordic countries: a parent reported serial cross-sectional study. *Child: Care, Health and Development*, 41(4), 593–599. <https://doi.org/10.1111/cch.12184>
- Brewer, G., & Kerslake, J. (2015). Cyberbullying, self-esteem, empathy and loneliness. *Computers in Human Behavior*, 48, 255–260. <https://doi.org/10.1016/j.chb.2015.01.073>
- Buelga, S., Cava, M. J., Moreno, D., & Ortega-Barón, J. (2022). Cyberbullying and suicidal behavior in adolescent students: A systematic review. *Revista de Educación*, 397, 43–67. <https://doi.org/10.4438/1988-592X-RE-2022-397-539>
- Buelga, S., Martínez-Ferrer, B., Cava, M. J., & Ortega-Barón, J. (2019). Propiedades psicométricas de la escala de cibervictimización CYBVICS y su relación con variables psicosociales. *Social Sciences*, 8(1), 1–13.
- Buelga, S., Martínez-Ferrer, B., & Musitu, G. (2016). Relaciones familiares y ciberacoso. In R. Navarro, S. Yubero, & E. Larrañaga (Eds.), *Ciberacoso en todo el mundo: Género, familia y salud mental* (pp. 94–114). Springer International Publishing.

- Calmaestra, J., del Moral, C., Escorial Senante, A., García, P., Perazzo, C., Sastre, A., & Ubrich, T. (2016). *Yo a eso no juego: Bullying y cyberbullying en la infancia*. Save the Children Spain.
- Calvete, E., Fernández-González, L., Royuela-Colomer, E., Morea, A., Larrueca-Iruretagoyena, M., Machimbarrena, J. M., González-Cabrera, J., & Orue, I. (2021). Moderating factors of the association between being sexually solicited by adults and active online sexual behaviors in adolescents. *Computers in Human Behavior*, 124, 1–9. <https://doi.org/10.1016/j.chb.2021.106935>
- Chen, Q., Chan, K. L., Guo, S., Chen, M., Lo, C. K., & Ip, P. (2022). Effectiveness of digital health interventions in reducing bullying and cyberbullying: A meta-analysis. *Trauma, Violence & Abuse*, 0(0), 15248380221082090. Advance online publication. <https://doi.org/10.1177/15248380221082090>
- Chen, Q., Lo, C. K. M., Zhu, Y., Cheung, A., Chan, K. L., & Ip, P. (2018). Family poly-victimization and cyberbullying among adolescents in a Chinese school sample. *Child Abuse & Neglect*, 77, 180–187. <https://doi.org/10.1177/15248380221082090>
- Chen, Q., & Zhu, Y. (2022). Cyberbullying victimization among adolescents in China: Coping strategies and the role of self-compassion. *Health & Social Care in the Community*, 30, e677–e686. <https://doi.org/10.1111/hsc.13438>
- Chen, Q., Zhu, Y., & Chui, W. H. (2020). A meta-analysis on effects of parenting programs on bullying prevention. *Trauma, Violence, & Abuse*, 22(5), 1–12. <https://doi.org/10.1177/1524838020915619>
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Erlbaum.
- Cuadrado-Gordillo, I., & Fernández-Antelo, I. (2016). Adolescents' perception of the characterizing dimensions of cyberbullying: Differentiation between bullies and victims perception. *Computers in Human Behavior*, 55, 653–663. <https://doi.org/10.1016/j.chb.2015.10.005>
- Delgado, B., & Escortell, R. (2018). Sex and grade differences in cyberbullying of Spanish students of 5th and 6th grade of primary education. *Anales de Psicología*, 34(3), 472–481.
- Delgado, B., Escortell, R., Martínez-Monteagudo, M. C., Ferrández-Ferrer, A., & Sanmartín, R. (2019). Cyberbullying, self-concept and academic goals in childhood. *The Spanish Journal of Psychology*, 22, E46. <https://doi.org/10.1017/sjp.2019.46>
- Ding, Y., Dongping, L., Li, X., Xiao, J., Zhang, H., & Wang, Y. (2020). Profiles of adolescent traditional and cyber bullying and victimization: The role of demographic, individual, family, school and peer factors. *Computers in Human Behavior*, 111(1–52), 106439. <https://doi.org/10.1016/j.chb.2020.106439>
- Escortell, R., Delgado, B., & Martínez-Monteagudo, M. C. (2020). Cybervictimization, self-concept, aggressiveness and school anxiety in school children: A structural equations analysis. *International Journal of Environmental Research and Public Health*, 17, 1–16. <https://doi.org/10.3390/ijerph17197000>
- Estévez, J. F., Cañas, E., & Estévez, E. (2020). The impact of cybervictimization on psychological adjustment in adolescence: Analyzing the role of emotional intelligence. *International Journal of Environmental Research and Public Health*, 17(10), 1–12, 3693. <https://doi.org/10.3390/ijerph17103693>
- Garaigordobil, M. (2013). *Cyberbullying. Screening de acoso entre iguales. Screening del acoso escolar presencial (bullying) y tecnológico (cyberbullying)*. TEA Ediciones.
- Garaigordobil, M. (2015). Cyberbullying in adolescents and youth in the Basque Country: Prevalence of cybervictims, cyberaggressors, and cyberobservers. *Journal of Youth Studies*, 18, 569–582. <https://doi.org/10.1080/13676261.2014.992324>
- Garaigordobil, M. (2017). Conducta antisocial: Conexiones con el bullying/cyberbullying y estrategias de resolución de conflictos. *Psychosocial Intervention*, 26, 47–54. <https://doi.org/10.1016/j.psi.2015.12.002>
- Garaigordobil, M., Aliri, J., Maganto, C., Bernarás, E. Y., & Jaureguizar, J. (2014). Cyberbullying: Prevalencia de víctimas, agresores y observadores en función del nivel socio-económico-cultural. Comunicación presentada al VI Congreso Internacional de Psicología Clínica. Santiago de Compostela, Spain.
- Giménez-Gualdo, A. M., Maquilón-Sánchez, J. J., & Arnaiz Sánchez, P. (2014). Acceso a las tecnologías, rendimiento académico y cyberbullying en escolares de secundaria. *Revista Iberoamericana de Psicología Y Salud*, 5(2), 119–133.
- González, M. C., Tourón, J., & y Gaviria, J. L. (1994). Validación del cuestionario de autodescripción de Marsh (SDQ-I) en el ámbito español. *Revista de Investigación Educativa*, 24(2), 7–26.
- González-Cabrera, J., Machimbarrena, J. M., Fernández-González, L., Prieto-Fidalgo, A., Vergara-Moragues, E., & Calvete, E. (2019). Health-related quality of life and cumulative psychosocial risks in adolescents. *Youth and Society*, 53(4), 636–653. <https://doi.org/10.1177/0044118X19879461>
- González-Cabrera, J., Montiel, I., Machimbarrena, J. M., Baridón-Chauvie, D., López-Carrasco, R., & Ortega-Barón, J. (2022). Peer victimization and aggression based on adolescence stages: An exploratory study. *Child Indicators Research*, 15, 2155–2170. <https://doi.org/10.1007/s12187-022-09950-4>
- González-Cabrera, J., Sánchez-Álvarez, N., Calvete, E., León-Mejía, A., Orue, I., & Machimbarrena, J. M. (2019). Psychometric properties of the triangulated version of the European Bullying Intervention Project Questionnaire: Prevalence across seven roles. *Psychology in the Schools*, 57(1), 78–90. <https://doi.org/10.1002/pits.22320>
- Guo, S., Liu, J., & Wang, J. (2021). Cyberbullying roles among adolescents: A social-ecological theory perspective. *Journal of School Violence*, 20(2), 167–181. <https://doi.org/10.1080/15388220.2020.1862674>
- Hayamizu, T., & Weiner, B. (1991). A test of Dweck's model of achievement goals as related to perceptions of ability. *The Journal of Experimental Education*, 59(3), 226–234. <http://www.jstor.org/stable/20152287>. <https://doi.org/10.1080/00220973.1991.10806562>
- Hellfeldt, K., López-Romero, L., & Andershed, H. (2019). Cyberbullying and psychological well-being in young adolescence: The potential protective mediation effects of social support from family, friends, and teachers. *International Journal of Environmental Research and Public Health*, 17(1), 45. <https://doi.org/10.3390/ijerph17010045>
- Herrera, M., Romera, E. M., Ortega, R., & Gómez, O. (2016). Influence of social motivation, self-perception of social efficacy and normative adjustment in the peer setting. *Psicothema*, 28(1), 32–39. <https://doi.org/10.7334/psicothema2015.135>
- Hollá, K. (2016). Cyberbullying as a negative result of cyber-culture of Slovak children and adolescents: Selected research findings. *Journal of Language and Cultural Education*, 4(2), 40–55. <https://doi.org/10.1515/jolace-2016-0015>
- Hong, Y. J., & Lee, K. (2022). Adolescent bystanders' moral emotions in cyberbullying. *School Psychology International*, 43(3), 271–295. <https://doi.org/10.1177/01430343221088186>
- Huang, J., Huebner, E. S., & Tian, L. (2022). Stability and changes in traditional and cyberbullying perpetration and victimization in childhood: The predictive role of depressive symptoms. *Journal of Interpersonal Violence*, 37(19–20), NP17300–NP17324. <https://doi.org/10.1177/08862605211028004>
- Inglés, C. J., Marzo, J. C., Castejón, J. L., Núñez, J. C., Valle, A., & y García-Fernández, J. M. (2011). Factorial invariance and latent mean differences of scores on the Achievement Goal Tendencies Questionnaire across gender and age in a sample of Spanish students. *Learning and Individual Differences*, 21(1), 138–143. <https://doi.org/10.1016/j.lindif.2010.10.008>
- Isorna, M., Navía, C., & Felpejo, M. (2013). La transición de la Educación Primaria a la Educación Secundaria: Sugerencias para padres. *Innovación Educativa*, 23(1), 161–177.
- Kim, B. K., Park, J., Jung, H. J., & Han, Y. (2020). Latent profiles of offline/cyber bullying experiences among Korean students and its relationship with peer conformity. *Children and Youth Services Review*, 118, 1–9. <https://doi.org/10.1016/j.childyouth.2020.105349>
- Kokkinos, C. M., Antoniadou, N., & Markos, A. (2014). Cyber-bullying: An investigation of the psychological profile of university student

- participants. *Journal of Applied Developmental Psychology*, 35(3), 204–214. <https://doi.org/10.1016/j.appdev.2014.04.001>
- Liu, J., Guo, S., Weissman, R., & Liu, H. (2020). Investigating factors associated with bullying utilizing latent class analysis among adolescents. *School Psychology International*, 1, 1–22. <https://doi.org/10.1177/014303432096706>
- Marsh, H. W. (1986). *The Self-Description Questionnaire (SDQ). A theoretical and empirical basis for the measurement of multiple dimension of preadolescent self-concept: A test manual and a research monograph*. The University of Sydney.
- Martín Montilla, A., Pazos Gómez, M., Montilla Coronado, M. V. C., & Romero Oliva, C. (2016). Una modalidad actual de violencia de género en parejas de jóvenes: Las redes sociales. *Educación XXI*, 19(2), 405–429. <https://doi.org/10.5944/educXXI.13934>
- Martínez-Monteagudo, M. C., Delgado, B., Inglés, C. J., & Escortell, R. (2020). Cyberbullying and social anxiety: A latent class analysis among Spanish adolescents. *International Journal of Environmental and Public Health*, 17(2), 406. <https://doi.org/10.3390/ijerph17020406>
- Miñano, P., Castejón, J. L., & Gilar, R. (2012). An explanatory model of academic achievement based on aptitudes, goal orientations, self-concept and learning strategies. *The Spanish Journal of Psychology*, 15(1), 48–60. https://doi.org/10.5209/rev_sjop.2012.v15.n1.37283
- Modecki, K. L., Minchin, J., Harbaugh, A. G., Guerra, N. G., & Runions, K. C. (2014). Bullying prevalence across contexts: A meta-analysis measuring cyber and traditional bullying. *The Journal of Adolescent Health: Official Publication of the Society for Adolescent Medicine*, 55(5), 602–611. <https://doi.org/10.1016/j.jadohealth.2014.06.007>
- Navarro, R., Ruiz-Oliva, R., Larrañaga, E., & Yubero, S. (2015). The impact of cyberbullying and social bullying on optimism, global and school-related happiness and life satisfaction among 10-12-years-old school children. *Applied Research in Quality of Life*, 10(1), 15–36. <https://doi.org/10.1007/s11482-013-9292-0>
- Nocentini, A., Fiorentini, G., di Paola, L., & Menesini, E. (2019). Parents, family characteristics and bullying behavior: A systematic review. *Aggression and Violent Behavior*, 45, 41–50. <https://doi.org/10.1016/j.avb.2018.07.010>
- Ortega-Barón, J., Buelga, S., Ayllón, E., Martínez-Ferrer, B., & Cava, M. J. (2019). Effects of intervention program Prev@cib on traditional bullying and cyberbullying. *International Journal of Environmental Research Public Health*, 16, 527. <https://doi.org/10.3390/ijerph16040527>
- Ortega-Barón, J., Buelga, S., & Cava, M. J. (2016). The influence of school climate and family climate among adolescents victims of cyberbullying. *Comunicar*, 24, 57–65. <https://doi.org/10.3916/c46-2016-06>
- Ortega-Barón, J., Montiel, I., Machimbarrena, J. M., Fernández-González, L., Calvete, E., & González-Cabrera, J. (2020). Epidemiology of cyber dating abuse victimization in adolescence and its relationship to health-related quality of life: A longitudinal study. *Youth and Society*, 54(5), 711–729. <https://doi.org/10.1177/0044118X20980025>
- Özdemir, Y. (2014). Cyber victimization and adolescent self-esteem: The role of communication with parents. *Asian Journal of Social Psychology*, 17(4), 255–263. <https://doi.org/10.1111/ajsp.12070>
- Patchin, J. W., & Hinduja, S. (2022). Cyberbullying among tweens in the United States: Prevalence, impact, and helping behaviors. *The Journal of Early Adolescence*, 42(3), 414–430. <https://doi.org/10.1177/02724316211036740>
- Rodríguez-Enríquez, M., Bennasar-Veny, M., Leiva, A., Garaigordobil, M., & Yáñez, A. M. (2019). Cyberbullying among secondary students: Social networking time, personality traits and parental education. *BMC Public Health*, 19(1), 1–7. <https://doi.org/10.1186/s12889-019-7876-9>
- Romera, E.-M., Cano, J. J., García-Fernández, C., & Ortega-Ruiz, R. (2016). Cyberbullying: Social competence, motivation and peer relationships. *Comunicar*, 48, 71–79. <https://doi.org/10.3916/C48-2016-07>
- Romero-Abrio, A., León-Moreno, C., Musitu-Ferrer, D., & Villarreal-González, M. E. (2019). Family functioning, self-concept and cybervictimization: An analysis based on gender. *Social Sciences*, 8(69), 1–13. <https://doi.org/10.3390/socsci8020069>
- Samper-García, P., Mestre-Escrivá, M. V., Malonda, E., & Mesurado, B. (2015). Victimization en la escuela: Relación de la crianza y variables funcionales disfuncionales del desarrollo. *Anales de Psicología*, 31(3), 849–858. <https://doi.org/10.6018/analesps.31.3.173291>
- Schreiber, J. B. (2017). Latent class analysis: An example for reporting results. *Research in Social and Administrative Pharmacy*, 13, 1196–1201. <https://doi.org/10.1016/j.sapharm.2016.11.011>
- Schultze-Krumbholz, A., Hess, M., Pfetsch, J., & Scheithauer, H. (2018). Who is involved in cyberbullying? Latent class analysis of cyberbullying roles and their associations with aggression, self-esteem, and empathy. *Cyberpsychology*, 14(4), 1–15. <https://doi.org/10.5817/CP2018-4-2>
- Schultze-Krumbholz, A., & Scheithauer, H. (2015). Cyberbullying. In T. P. Gulotta (Ed.), *Handbook of adolescent behavioral problems: Evidence-based approaches to prevention and treatment* (pp. 415–428). Springer Science Business Media. https://doi.org/10.1007/978-1-4899-7497-6_22
- Selkie, E., Fales, J. L., & Moreno, M. A. (2016). Cyberbullying prevalence among US middle and high school-aged adolescents: AAA systematic review and quality assessment. *Journal of Adolescents Health*, 58, 125–133. <https://doi.org/10.1016/j.jadohealth.2015.09.026>
- Seo, H. J., Jung, Y. E., Kim, M. D., & Bahk, W. M. (2017). Factors associated with bullying victimization among Korean adolescents. *Neuropsychiatric Disease and Treatment*, 13, 2429–2435. <https://doi.org/10.2147/NDT.S140535>
- Shavelson, J., Hubner, J. J., & Stanton, G. C. (1976). Self-concept: Validation of construct interpretations. *Review of Educational Research*, 46(3), 407–442. <https://doi.org/10.3102/00346543046003407>
- Smahel, D., Machackova, H., Mascheroni, G., Dedkova, L., Staksrud, E., Ólafsson, K., Livingstone, S., & Hasebrink, U. (2020). EU Kids online 2020: Survey results from 19 countries. EU Kids Online. <https://doi.org/10.21953/lse.47fdeqj010fo>
- Smith, P. K., Mahdavi, J., Carvalho, M., Fisher, S., Russell, S., & Tippett, N. (2008). Cyberbullying: Its nature and impact in secondary school pupils. *Journal of Child Psychology and Psychiatry*, 49(4), 376–385. <https://doi.org/10.1111/j.1469-7610.2007.01846.x>
- Tejada, E., Castaño, C., & Romero, A. (2019). Los hábitos de uso en las redes sociales de los preadolescentes. *RIED. Revista Iberoamericana de Educación a Distancia*, 22(2), 119–133. <https://doi.org/10.5944/ried.22.2.23245>
- Vanderhoven, E., Schellens, T., & Valcke, M. (2014). Enseñar a los adolescentes los riesgos de las redes sociales: Una propuesta de intervención en Secundaria. *Comunicar*, 43, 123–132. <https://doi.org/10.3916/C43-2014-12>
- Weiner, B. (2004). Attribution theory revisited: Transforming cultural plurality into Theoretical unity. In D. M. McInerney & S. van Etten (Eds.), *Big theories revisited* (pp. 13–29). Information Age Publishing.
- World Medical Association. (2013). Declaration of Helsinki. Ethical principles for medical research involving human subjects. Retrieved from: <https://www.wma.net/what-we-do/education/medical-ethics-manual/>
- Zych, I., Farrington, D. P., & Tfofi, M. M. (2019). Protective factors against bullying and cyberbullying: A systematic review of meta-analyses. *Aggression and Violent Behavior*, 45, 4–19. <https://doi.org/10.1016/j.avb.2018.06.008>

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