Bullying is an aggressive behaviour studied for over forty years (Zych, Ortega-Ruiz, & Del Rey, 2015a) defined as an intentional, repeated, long-term and unjustified aggression (Olweus, 2013) that transgresses moral values (Ortega, 2010) perpetrated by some students on their peers who cannot defend themselves (Smith et al., 2008). Bullying has some very serious and damaging consequences. Even in adulthood, some victims report negative emotions associated with childhood bullying (Beltrán-Catalán, Zych, & Ortega-Ruiz, 2015) and depression later in life (Tiofi, Farrington, Lösel, & Loeber, 2011).

A new type of aggressive behaviour called cyberbullying appeared together with the emergence of information and communication technologies (Zych et al., 2015a). On the Internet, positive interpersonal relationships and interactions can be destroyed by this repeated and intentional aggressive behaviour (Cuadrado-Gordillo & Fernández-Antelo, 2016). Cyberbullying is an intentionally harmful aggressive behaviour perpetrated through electronic devices (Tokunaga, 2010) and victims cannot defend themselves easily (Smith et al., 2008). In cyberspace, even one act can persist without the necessity of repetition (Menesini et al., 2013) that transgresses moral values (Ortega, 2010) perpetrated by some students on their peers who cannot defend themselves (Smith et al., 2008). Bullying has some very serious and damaging consequences. Even in adulthood, some victims report negative emotions associated with childhood bullying (Beltrán-Catalán, Zych, & Ortega-Ruiz, 2015) and depression later in life (Tiofi, Farrington, Lösel, & Loeber, 2011).

Victimisation through bullying and cyberbullying: Emotional intelligence, severity of victimisation and technology use in different types of victims

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Abstract

Background: Bullying and cyberbullying are global public health problems. However, very few studies described prevalence, similarities and differences among face-to-face victims, cybervictims and students who are victimised through both bullying and cyberbullying. This study was conducted to describe these different patterns of victimisation and severity of victimisation, emotional intelligence and technology use in different types of victims. Method: A total number of 2,139 secondary school students from 22 schools, randomly selected from all provinces of Andalusia, Spain, participated in this study. Information about bullying, cyberbullying, social networking sites use and perceived emotional intelligence was collected. Results: Face-to-face victimisation only is the most common type of victimisation followed by mixed victimisation. Cybervictimisation only is rare. Mixed victims score higher in severity of bullying and present higher emotional attention than face-to-face victims. Conclusions: Most victims of cyberbullying are also face-to-face victims. Holistic approach that focuses on different problems at the same time seems to be needed to tackle these behaviours. Keywords: Bullying victimisation, cybervictimisation, severity, co-occurrence, emotional intelligence, technology use.

Resumen

Victimización de bullying, cyberbullying y ambas: inteligencia emocional, gravedad de victimización y uso de tecnologías en diferentes tipos de victimas. Antecedentes: el bullying es un problema de salud pública mundial. Sin embargo, muy pocos estudios describieron la prevalencia, las similidades y las diferencias entre las víctimas cara a cara, cibervictimas y estudiantes que han sido victimizados de ambas maneras. Este estudio se ha llevado a cabo para describir estos diferentes patrones de victimización y la gravedad de victimización, la inteligencia emocional y el uso de las tecnologías en diferentes tipos de víctimas. Método: en este estudio participaron 2.193 estudiantes de 22 escuelas, seleccionadas aleatoriamente de todas las provincias de Andalucía, España. Se recogió información sobre bullying, cyberbullying, uso de redes sociales e inteligencia emocional percibida. Resultados: la victimización cara a cara es el tipo más común de victimización seguida de victimización mixta. Cibervictimización sola es poco común. Las víctimas mixtas muestran puntuación más alta en la gravedad de la victimización cara a cara y una mayor atención emocional que las víctimas cara a cara. Conclusiones: la mayoría de las cibervíctimas son también víctimas cara a cara. Un enfoque holístico centrado en diferentes problemas a la vez parece necesario para erradicar estos problemas. Palabras clave: victimización de bullying, cibervictimización, gravedad, co-occurrencia, inteligencia emocional, uso de tecnología.
A systematic review of 21 Spanish studies showed that the mean prevalence for cyberbullying victimisation was 26.65% (Zych, Ortega-Ruiz, & Martín-López, 2016). Any type of cybervictimisation was reported by over 78% of Asturian adolescents (Álvarez-García, Núñez, Doborro, & Rodríguez, 2015). In Valencian community around 25% of adolescents reported mobile phone victimisation and around 29% Internet victimisation (Buelga, Cava, & Musitu, 2010). Around 30% of adolescents reported cybervictimisation in Biscay (Estévez, Villardón, Calvete, Padilla, & Orue, 2010), around 5% of adolescents were severe cybervictims in Andalusia (Del Rey et al., 2015) and around 30% of adolescents reported being cybervictims in Basque Country (Garaigordobil, 2015). Regarding gender and age, a systematic review conducted by Zych, Ortega-Ruiz and Del Rey (2015) showed that the results were inconsistent with rather small gender and age differences. There are big differences in prevalence reported by different studies, mostly related to the way in which bullying and cyberbullying were defined and measured. Nevertheless, all the studies show that bullying and cyberbullying victimisation is present and prevalent in Spain and throughout the world.

There is still certain disagreement on whether cyberbullying is just one more form of bullying or whether it should be treated as a different phenomenon. Several studies found that bullying and cyberbullying are highly correlated (Del Rey, Elipe, Ortega-Ruiz, 2012; Baldry, Farrington, & Sorrentino, 2016). It is rare to find students who experience cyberbullying only, without also suffering some form of face-to-face bullying (Cross, Lester, & Barnes, 2015; Kowalski & Limber, 2013). Waasdorp and Bradshaw (2015) found that 23% of students were victims of any form of bullying (cyber, relational, physical, and verbal), with 50.3% of those victims reporting being victimised by all four forms and only 4.6% were only cyberbullied.

Although there are many studies that described co-occurrence of bullying and cyberbullying, very few described different patterns of victimisation such as face-to-face victimisation only versus cybervictimisation only or both. Moreover, it is still necessary to understand how these types of victims differ from each other. It is possible that certain variables increase children’s vulnerability to become victimised through bullying only while other variables might increase victimisation offline and also online. Nevertheless, these variables still need to be discovered.

Victims of face-to-face bullying who use electronic devices with high frequency could potentially be more vulnerable to become also cybervictims. Some studies reported that frequent use of social networking sites (Del Río, Sabada, & Bringué, 2010) significantly increased the probability of being cyber victimised. Thus, it is possible that victims of face-to-face bullying who use social networking sites with high frequency are at risk of being victimised also in cyberspace. Given that cyberbullying was sometimes described as another type of bullying rather than a different phenomenon (Olweus, 2013), it is possible that severe face-to-face victims are more vulnerable to be cybervictimised than milder victims.

Another promising line of research focuses on the relationship between bullying, cyberbullying and emotional intelligence (Zych, Farrington, Llorent, & Triffo, 2017). Emotional intelligence is the ability to express, perceive, understand and manage emotions (Mayer & Salovey, 1997). Perceived emotional intelligence includes emotional attention defined as attention paid to emotions in oneself, emotional clarity defined as understanding of emotional states and emotional repair defined as an ability to increase positive emotions and decrease negative emotions (Salguero, Fernández-Berrocal, Balluerka, & Aritzeta, 2010).

High levels of emotional intelligence were found to be related to low levels of face-to-face victimisation in several studies (Kokkinos & Kipritsi, 2012). Elipe, Ortega, Hunter and Del Rey (2012) found that victims of bullying had higher scores in emotional attention and lower scores in emotional repair. However, they also found that the level of perceived emotional intelligence was not statistically different between students who were involved in cyberbullying and those who were not involved in cyberbullying. Casas, Ortega-Ruiz and Del Rey (2015) reported that face-to-face victimisation was predicted by higher emotional attention and lower emotional clarity and repair. These findings suggest that emotional intelligence could possibly protect children from victimisation but more studies are needed to confirm this relationship. The level of emotional intelligence in mixed victims (i.e., victimised through bullying and cyberbullying) could also differ from the level of emotional intelligence in face-to-face victims but this possible relationship still needs to be discovered.

Although the number of studies on bullying and cyberbullying increased rapidly throughout the past decades, there are still many gaps in knowledge that need to be addressed. It is known that bullying and cyberbullying are highly correlated but patterns of involvement (bullying only, cyberbullying only or mixed) still need to be described. Not all the victims of face-to-face bullying become also cybervictims but very little is known about variables that could increase mixed victimisation versus face-to-face victimisation only. Thus, the first objective of this study was to describe the prevalence of different patterns of victimisation including face-to-face victimisation, cybervictimisation and mixed victimisation. The second objective was to discover if there are differences between face-to-face victims and mixed victims in the frequency of technology use, academic year, gender, severity of face-to-face victimisation and perceived emotional intelligence. Mixed victimisation was expected to be less frequent than face-to-face victimisation only, but more frequent than cyber victimisation only. It was also hypothesised that severity of bullying would be higher in mixed victims in comparison to face-to-face victims and that emotional attention, emotional repair and frequency of social networking sites use would be different in mixed victims versus face-to-face victims.

Methods

Participants

A total number of 2,139 adolescents enrolled in 22 public (75.5%) and private (24.5%) secondary schools, randomly selected from all provinces of Andalusia (Almeria 9.1%, Cadiz 12.6%, Cordoba 8.8%, Granada 13.9%, Huelva 4.9%, Jaen 9.1%, Malaga 13.9% and Seville 22.9%) Spain, participated in this study. This was a representative sample of Andalusian adolescents enrolled in the four compulsory secondary education academic years (25.3% in Year 1, 25.9% in Year 2, 24.7% in Year 3 and 23.7% in Year 4), aged between 11 and 19 years (M = 13.79, SD = 1.40), 50.9% girls and 48% boys. Participants included majority and minority groups (94.5% heterosexuals and 4.8% of sexual minorities; 76.5% ethnic-cultural majority and 19.3% minorities).
Procedure

A multi-stage stratified sampling with proportional affixation was performed considering the student population of 372,031 (2014/2015) secondary compulsory education students in Andalusia (Spain). Sampling was performed with 95% of reliability and a sampling error of 2.1% taking into account the proportion of students in public and private secondary schools, in each province and location in small, medium and big cities/towns. A cluster sampling was carried out and it was assumed that a minimum of 80 students per secondary school would be included (20 students in each academic year, i.e., year 1, 2, 3 and 4).

Head teachers were contacted, informed about this study and asked to collaborate and parental consents were obtained. Data collection took place within regular classroom hours after the researchers informed the students about the objectives, voluntariness and anonymity of their collaboration and responses, and their right to withdraw at any time. Only 15 students withdrew from the study. Participants completed the questionnaires in about thirty minutes, always supervised by the researchers and without the teachers’ access to the individual data. This study was approved by the ethic committee of the University of Cordoba and was conducted according to the national and international ethical standards.

Instruments

Demographic data were collected regarding gender, age and academic year. There was one question about the frequency of use of social networking sites (never, daily, weekly, monthly, annually).

- The Spanish version of the European Bullying Intervention Project Questionnaire (Ortega-Ruiz et al., 2016), with 14 items: 7 focused on victimisation and 7 focused on perpetration (physical, direct and indirect insults, threatening, breaking things, gossiping). The questionnaire has four Likert response options ranging from 0 (never) to 4 (more than once a week). A Confirmatory Factor Analysis with the current sample showed a good fit (SB $\chi^2 = 962.01; df = 76$; NFI = .95; NNFI .94, CFI = .95, RMSEA = .076, 90% CI = 0.072-0.081). This questionnaire has excellent reliability indexes in this study (victimisation $\alpha = 0.90$, and perpetration $\alpha = 0.90$).

- The Spanish version of the European Cyberbullying Intervention Project Questionnaire (Del Rey et al., 2015; Ortega-Ruiz et al., 2016). The questionnaire has four answer options on a Likert scale ranging from 0 (never) to 4 (more than once a week) with 11 items focused on victimisation and 11 focused on perpetration (direct and indirect insults, threatening, stealing personal information, identity theft, uploading personal information, pictures or videos, altering pictures, exclusion and gossiping in cyberspace). This questionnaire has excellent reliability indexes in this study (victimisation $\alpha = 0.94$, and perpetration $\alpha = 0.96$). The Confirmatory Factor Analysis showed a good fit (SB $\chi^2 = 1426.06; df = 208$; NFI = .97; NNFI .97, CFI = .98; RMSEA = .054, 90% CI = .052-.057).

- Trait Meta-Mood Scale-24 (TMMS-24, Fernández-Berrocal, Extremera, & Ramos, 2004), with 24 items of which 8 items refer to emotional attention, 8 items refer to emotional clarity and 8 items to emotional repair. The questionnaire has 5 response options on a Likert scale ranging from 1 (disagree) to 5 (agree) and an excellent reliability indexes in this study (emotional attention $\alpha = 0.93$, emotional clarity $\alpha = 0.93$, emotional repair $\alpha = 0.90$). The Confirmatory Factor Analysis showed a good fit (SB $\chi^2 = 11819.68; df = 249$; NFI = .98; CFI = .98; RMSEA = .060; RMSEA 90% CI = .057 - .062).

Data analysis

Students were assigned to bullying and cyberbullying roles based on their answers to perpetration and victimisation questions. If a student responded “once a month” or more to any item on victimisation and never or once to any item on perpetration, he or she was considered a victim (and vice versa for bullies and cyberbullies). If a student answered “once a month” or more to any item on both, victimisation and perpetration, he or she was considered a bully/victim. Participants who answered “never” or “once” to all the items were considered uninvolved. Students who reported victimisation or perpetration only once were considered uninvolved given that bullying and cyberbullying are defined as frequent and long-term aggressive behaviours. Participants classified as perpetrators or bully/victims (and cyberbully/victims) were excluded from the analyses. Victims were classified to face-to-face only, cybervictims only and mixed (face-to-face and through electronic devices).

Psychometric properties of the questionnaires were tested through confirmatory factor analyses with EQS 6.2 with maximum likelihood robust method and polychoric correlations (Satorra-Bentler chi-square). Acceptable fit was considered with RMSEA below .08, NFI and CFI above .90 (Bentler, 1990). Cronbach’s alphas were calculated with SPSS 23.

Groups were compared with cross-table analyses and Student t-tests using SPSS 23. Analyses included comparisons regarding the frequency of social networking site use, gender and academic year, severity of victimisation and the level of perceived emotional intelligence. Logistic regression analyses were performed to find out if any of these variables were uniquely related to face-to-face versus mixed victimisation.

To measure the effect sizes of the associations between variables Odds Ratios (OR) were calculated using the Campbell Collaboration effect size calculator. An OR of 1 shows that there is no association between variables, an OR smaller than 1 shows a negative association and an OR bigger than 1 shows a positive relationship. If the confidence intervals (CI) include 1, the association is not statistically significant. To enable easy comparison of the results, Odds Ratios were calculated as an effect size to compare both means and percentages.

Results

Considering the total sample (N = 2,139), 20.71% stated to have suffered bullying and/or cyberbullying victimisation, without displaying aggressive behaviours against others (pure victims). After eliminating all the perpetrators from the analyses, percentages of different types of victims are shown in Figure 1. Victims of face-to-face bullying had high odds of being also victims of cyberbullying.
Academic years and gender were added as a layer in the cross-table analyses. It was found that victims of face-to-face bullying had higher odds of being victimised through cyberbullying when compared to adolescents not involved in face-to-face bullying in both genders and in all the academic years (Table 1).

Face-to-face victimisation only was more common than mixed victimisation in both genders and all the academic years. When compared to non-victims of face-to-face bullying, girls who were face-to-face victims had higher odds of being also cybervictims than boys. Taking into account different academic years, the highest odds were found in the second year.

Students who were victimised by face-to-face bullying only and mixed victims were compared on the severity of bullying (i.e., total score in the face-to-face victimisation scale). Severity of bullying was higher \( t_{(180)} = 9.73, p < .01, \text{OR} = 4.41, 95\% \text{CI} = 3.01 - 6.45 \) in mixed victims \( M = 16.18, SD = 6.49 \) when compared to face-to-face victims only \( M = 12.08, SD = 3.95 \). Mixed victims were compared with cybervictims only regarding the severity of cybervictimisation. There was no significant difference in the severity of cybervictimisation \( t_{(173)} = 1.41, p = .16, \text{OR} = 1.64, 95\% \text{CI} = 0.82 - 3.26 \) between cybervictims only \( M = 15.64, SD = 3.86 \) and mixed victims \( M = 16.87, SD = 4.67 \).

Uninvolved students, face-to-face victims only, cyber victims only and mixed victims did not report significant difference in emotional clarity \( F_{(1,1478)} = 205, p = .893 \) and emotional repair \( F_{(1,1478)} = .506, p = .678 \). However, significant differences were found in emotional attention \( F_{(1,1478)} = 24.411, p < .01 \) between uninvolved students and face-to-face victims \( M = 23.36, SD = 7.61 \) vs. \( M = 25.73, SD = 8.12 \); uninvolved students and mixed victims \( M = 23.36, SD = 7.61 \) vs. \( M = 28.61, SD = 7.39 \); face-to-face victims and mixed victims \( M = 25.73, SD = 8.12 \) vs. \( M = 28.61, SD = 7.39 \). There was no significant difference between cybervictims only \( M = 26.71, SD = 8.80 \) and uninvolved students \( M = 23.36, SD = 7.61 \), face-to-face victims only \( M = 25.73, SD = 8.12 \) or mixed victims \( M = 28.60, SD = 7.39 \).

A logistic regression analysis was performed to discover if emotional attention, emotional clarity and emotional repair, together with the frequency of social networking site use, age, gender, academic year and severity of bullying victimisation were uniquely related to mixed victimisation versus face-to-face victimisation only (Table 2). The model explained 20.9% of the variance (Nagelkerke $R^2$), was statistically significant ($\chi^2 = 62.73$, $p < .01$) and classified 64.6% of the cases. The results showed that mixed victimisation was uniquely related to higher severity of face-to-face victimisation and high emotional attention.

**Discussion**

The main aim of this study was to describe patterns of co-occurrence of bullying and cyberbullying victimisation, and to discover similarities and differences between victims who suffer from one or both types of victimisation. The results showed that face-to-face victimisation only is the most common type of victimisation followed by mixed victimisation. Cybervictimisation only, without being a victim of face-to-face bullying is rare. Victims of face-to-face bullying have much higher probability of being cybervictimised than student who are not face-to-face victims. It is possible that cyberbullying is an extension of bullying occurred in school (Waasdorp & Bradshaw, 2015). Overlap between bullying and cyberbullying was reported in many previous studies (Baldry et al., 2016; Del Rey et al., 2012). Other studies reported that cyberbullying is mostly perpetrated by schoolmates (Smith et al., 2008). Our findings suggest that cyberbullying seems to be another type of bullying, possibly perpetrated by the same children, rather than a different phenomenon.

The severity of face-to-face bullying was independently related to the mixed victimisation. A possible explanation could be that severe victims of bullying use social networking sites to evade...
from the distress derived from victimisation (Gamez-Guadix, Orue, Smith, & Calvete, 2013), sharing more personal data or feelings. If cyberbullying is an extension of bullying students who are severe face-to-face victims could be more likely to be victimised in cyberspace. The fact that severity of cyberbullying was the same in mixed victims than in victims of cyberbullying only also suggests that cyberbullying is not an isolated phenomenon but an extension of bullying.

Some previous studies found that victims of bullying had high emotional attention and low emotional clarity (Elipe et al., 2012). In the case of victims of cyberbullying, there were conflicting results: in the previous research on the one hand, victims were found to have low emotional clarity and repair (Elipe, Mora-Merchán, Ortega-Ruiz, & Casas, 2015) and, on the other hand, that emotional intelligence did not discriminate between victims of cyberbullying and non-involved (Elipe et al., 2012). The present study advanced knowledge on different types of victimisation and emotional intelligence. As mixed victims had higher emotional attention than face-to-face victims, it is possible that they expend more cognitive resources to analysing and understanding own feelings.

The results of this study suggest that it is useful to take into account a person as a whole and focus on different problems at the same time from an ecological and holistic perspective (Ortega-Ruiz, Del Rey, & Casas, 2012). Consequently, interventions should also focus on different problems at the same time and not only on cyberbullying. Special attention should be paid to severe victims of bullying to check if they are victims of cyberbullying too, as they present an increased risk. This fact makes the role of teachers more decisive to prevent, detect and intervene in bullying and cyberbullying.

This study sheds some light on the co-occurrence of face-to-face victimisation and cybervictimisation. Nevertheless, its cross-sectional design does not allow to establish causal relationships or the order of occurrence of face-to-face victimisation versus cybervictimisation. Future longitudinal studies could clarify if, for example, students become victims of face-to-face bullying first and then are also cyberbullied. It could be also useful to conduct studies with measures different from self-reports and focus also on other variables that could possibly explain co-occurrence. Even with some limitations, it should be emphasised that the current study conducted with a representative sample of adolescents report findings that can be useful for research and practice related to bullying and cyberbullying.

Acknowledgements

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References


Table 2

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<td>.102</td>
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The impact of teacher management and trait emotional intelligence on other variables that could possibly explain co-occurrence. Even with some limitations, it should be emphasised that the current study conducted with a representative sample of adolescents report findings that can be useful for research and practice related to bullying and cyberbullying.

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