



Bystander responses to cyberbullying: The role of perceived severity, publicity, anonymity, type of cyberbullying, and victim response

Peter J.R. Macaulay^{a,*}, Lucy R. Betts^b, James Stiller^c, Blerina Kellezi^b

^a University of Derby, UK

^b Nottingham Trent University, UK

^c University of Chichester, UK

ARTICLE INFO

Keywords:

Cyberbullying
Bystanders
Severity
Publicity
Anonymity
Type of cyberbullying
Victim upset

ABSTRACT

Cyberbullying often occurs in group-based situations; therefore, how young people respond when they witness cyberbullying is important in the process of combating the issue. This study examined how young people perceive the severity of cyberbullying incidents and how they respond as a bystander according to different factors associated with cyberbullying (i.e., publicity, anonymity, type, and victim response). The final sample was 990 (545 female, 403 male, 42 non-disclosed) students aged between 11 and 20 years ($M_{age} = 13.16$, $SD_{age} = 2.14$) from two schools and one college in England. Participants responded to 24 hypothetical vignettes which were manipulated to measure publicity, anonymity, type of cyberbullying, and victim response. Participants responded to items assessing a. perceived severity, and b. bystander responses. The bystander responses examined were: ignore the incident, encourage the bully, seek adult help, seek friend help, provide emotional support to the victim, and challenge the bully. Perceived severity was higher in public scenarios, when the bully was anonymous, and when the victim was upset. Victim response was the most influential factor across all response strategies on how young people react to cyberbullying, followed by the publicity of the incident, the anonymity of the bully, and to a limited extent, the type of cyberbullying. The results suggest that bystanders do respond differently to cyberbullying according to the publicity, anonymity, type of cyberbullying, and victim response.

1. Introduction

Defined as “an aggressive, intentional act carried out by a group or individual, using electronic forms of contact, repeatedly and over time against a victim who cannot easily defend him or herself” (Smith et al., 2008, p. 376), cyberbullying presents a cause for concern within educational settings (Macaulay et al., 2018; Myers & Cowie, 2019). Smith et al.’s definition of cyberbullying draws on the traditional bullying (i.e., face-to-face bullying) criteria of: (i) the intention to inflict harm on the victim, (ii) the act is repeated by the perpetrator, and (iii) there is a power imbalance between the victim and perpetrator (Olweus, 1999; Smith & Sharp, 1994). In addition to these distinct criteria, cyberbullying is perpetrated using electronic communication methods, and is often characterised by unique features in the online domain, namely anonymity and publicity.

There are variations in the reported prevalence of cyberbullying. For example, findings from an international review across 159 studies of young people aged 12–18-years-old found that in the last six months, the

prevalence of cyberbullying victimisation ranged from 1.6% to 56.9%, while perpetration reports ranged from 1.9% to 79.3% (Brochado et al., 2017). More recently, a report from data gathered in 2020 shows that nearly all children (97%) aged 5–15-year-olds use a device to go online, with 91% of 12–15-year-olds having access to their own smartphone (Ofcom, 2021). This illustrates the increased accessibility to digital technology and online communication, resulting in a range of risks and opportunities as young people go online (Livingstone et al., 2017; Macaulay et al., 2020). Previous studies suggest that cyberbullying is a common experience for many young people (Kowalski et al., 2019; Menesini & Salmivalli, 2017; Olweus & Limber, 2010) which can lead to an array of negative consequences. For example, negative feelings including loneliness (Varghese & Pistole, 2017), reduced self-efficacy (Heiman et al., 2015), depression (Tynes et al., 2010), lower levels of self-esteem (Brewer & Kerslake, 2015), anti-social behaviour (Wolke et al., 2017), and in some cases can lead to suicidal thoughts and/or attempts (Hinduja & Patchin, 2019). Together, the prevalence and impact of involvement in cyberbullying highlight the importance of

* Corresponding author. School of Psychology, Kedleston Road, Derby, DE22 1GB, UK.

E-mail address: p.macaulay@derby.ac.uk (P.J.R. Macaulay).

<https://doi.org/10.1016/j.chb.2022.107238>

Received 29 October 2021; Received in revised form 30 January 2022; Accepted 11 February 2022

Available online 15 February 2022

0747-5632/© 2022 Elsevier Ltd. All rights reserved.

anti-cyberbullying initiatives (e.g., Cyber Friendly Schools; Cross et al., 2016). Further, as cyberbullying is an interpersonal problem in a social context, it is important the views of young people are explored to understand how they perceive and respond to cyberbullying (Cowie, 2013).

Bryce and Fraser (2013) conducted a set of 18 focus groups with young people aged 9–19 in the UK exploring young people's perceptions and experiences of cyberbullying. While young people perceive cyberbullying to be a serious problem, they also recognised that cyberbullying is normalised in society and embedded within online social interactions. Furthermore, one study reported that some young people regard cyberbullying as a serious contemporary issue in society (Sobba et al., 2017). Despite being recognised as a serious problem, cyberbullying often goes un-reported by victims due to fear of disclosure (Betts & Spenser, 2017; Dennehy et al., 2020), and so one aspect of cyberbullying that merits closer attention is the role of peers or bystanders who observe the incident. Cyberbullying often occurs in group-based situations, and therefore, how young people respond when they witness cyberbullying is important to the process of combating the issue (Pepler et al., 2021). Individuals involved in a cyberbullying situation can be classified broadly into three major roles: the instigators of the incident known as perpetrators, receivers of the targeted insult known as victims, and observers that are present when the incident takes place, also known as bystanders. Bystanders in cyberbullying are those who are present and/or actively witness a victim being bullied online and play a crucial role in the bullying dynamic (Machackova, 2020; Pepler et al., 2021). Due to the anonymous nature and capacity in the online environment, it is possible to have numerous bystanders present at any one time (Brody & Vangelisti, 2016).

The reactive behaviours of these bystanders play a crucial role on the permanence of cyberbullying incidents and the consequences it may have to the victim and perpetrator. These reactive behaviours from bystanders can be constructive victim-focused (e.g., providing emotional support to the victim), constructive bully-focused (e.g., telling the bully to stop), or aggressive (e.g., threatening the bully) (Bussey et al., 2020; Luo & Bussey, 2019; Moxey & Bussey, 2020). Even though the online environment is characterised by increased anonymity and autonomy, studies still report a lack of bystander constructive focused intervention strategies to cyberbullying scenarios (Song & Oh, 2018). One explanation for this is the fear of retaliation of becoming the victim (Balakrishnan, 2018; Bauman, 2013), and so bystanders reframe from constructive intervention strategies. Bystanders may also lack the skills and awareness on how to respond to cyberbullying when they witness it (Gini et al., 2008; Kowalski & Limber, 2007). A focus on bystander processes is warranted not least because peer support can help alleviate victims' suffering (Sainio et al., 2011), so it is important to explore different factors associated with bystander intervention to promote constructive intervention strategies to combat cyberbullying.

1.1. Factors that influence bystander intervention

Perceived severity has been implicated as an influential factor for bystander responses because of the association with the perception on the potential or practical harm (Chen & Cheng, 2017). For example, when young people evaluate incidents of cyberbullying as severe, they are more motivated to positively intervene to support the victim (Bastiaensens et al., 2014; Desmet et al., 2012; 2014). In addition, research with 868 11–13-year-olds found that bystanders reported they would provide emotional support to the victim and intervene to address the bully when they evaluated the incident to be severe, characterised by the intensity of the bullying, frequency of the victimisation, and extent the victim was upset (Macaulay et al., 2019). Therefore, there is value to be had in measuring how young people perceive the severity of different factors associated with cyberbullying.

In addition to severity, different personal and situational factors have been identified in either attenuating or precipitating constructive

bystander responses to cyberbullying (Domínguez-Hernández et al., 2018). For instance, the type of cyberbullying has been implicated in the literature as a factor that young people perceive differently. There is a recognised distinction between text based (e.g., posting or sharing negative comments), and visual based (e.g., posting or sharing an embarrassing photo/video) cyberbullying behaviours. For example, early research by Smith et al. (2008) identified how the type of cyberbullying may impact on perceived severity, whereby visual acts of cyberbullying were perceived more severe than written forms, attributed to the greater impact for the victim. The notion that visual forms of cyberbullying are more severe has been consistently reported in the literature (Menesini et al., 2011; Pieschl et al., 2013; Slonje & Smith, 2008; Smith et al., 2006, 2008). The perceived difference in severity for visual acts of cyberbullying has been attributed to the increased impact on the victim, leading to further distress (Pieschl et al., 2013; Slonje & Smith, 2008; Smith et al., 2006, 2008). As well as the type of cyberbullying, the extent to which the victim is upset also plays a role in how young people perceive and respond to cyberbullying. Research suggests that when the victim is more upset from victimisation of cyberbullying, young people are more willing to provide positive bystander support and help the victim (Domínguez-Hernández et al., 2018; Macaulay et al., 2019). As such, the current study will explore perceived severity of cyberbullying accordingly to the type of cyberbullying, and extent the victim is upset, and explore differences in bystander response strategies according to these factors. Specifically, it is hypothesised that perceived severity will be higher for visual scenarios, compared to written verbal scenarios (Menesini et al., 2011; Pieschl et al., 2013; Slonje & Smith, 2008; Smith et al., 2006, 2008), perceived severity will be higher when the victim is upset, compared to when the victim is not upset (Domínguez-Hernández et al., 2018; Macaulay et al., 2019), and there will be a difference in likelihood of bystander response according to the type of cyberbullying and extent victim is upset.

In addition, other factors like the publicity and anonymity of cyberbullying also have an impact on how young people perceive and respond to cyberbullying. The public nature associated with cyberbullying means that young people online are more likely to witness these incidents (Mishna et al., 2009), so it is important to understand how they respond to promote constructive bystander intervention strategies. The publicity of cyberbullying is distinguished between private, semi-public, and public instances (Fawzi, 2009), and this unique characteristic of cyberbullying can be associated with increased negative outcomes for the victim. The additional characteristic of anonymity also mean victims may not know the identity of their perpetrator, and bystanders may not know how to respond if the perpetrator has concealed his/her identity. Previous research shows that young people perceive cyberbullying to be more severe than traditional bullying, due to the publicity and anonymity characteristics of cyberbullying (Sticca & Perren, 2013). In addition, qualitative research of interviews across 25 15–24-year-olds found that public instances of cyberbullying, and those where the perpetrator had concealed their identity were regarded as more severe (Dredge et al., 2014). Such findings pertaining to publicity are consistent across young people in a range of countries (Nocentini et al., 2010). These findings were attributed to the increased distress and anxiety when exposed in the public domain (Pieschl et al., 2015; Ševčíková et al., 2012), and feelings of loneliness and fear when the victim did not know the identity of the perpetrator (Corby et al., 2016; Dredge et al., 2014; Vandebosch et al., 2014). As such, the current study will explore perceived severity of cyberbullying accordingly to the publicity and anonymity of cyberbullying, with the hypotheses perceived severity will be higher in public scenarios (Nocentini et al., 2010; Pieschl et al., 2015; Sticca & Perren, 2013), compared to semi-public or private, and perceived severity will be higher when the bully is anonymous, compared to not anonymous (Corby et al., 2016; Dredge et al., 2014; Sticca & Perren, 2013; Vandebosch et al., 2014).

The literature presented above highlight the moderating factors of publicity and anonymity on the perceived severity of cyberbullying, but

also suggest young people may respond differently to cyberbullying based on such features. The nature of cyberbullying means there could be an infinite number of witnesses online (Brody & Vangelisti, 2016) and so it is important to consider if the role of publicity influences bystander action to cyberbullying. For example, one study of 63 primary, secondary, and college teachers using focus groups found that teachers perceived the role of publicity as a key factor in how young people respond to cyberbullying, but also how teachers manage it (Macaulay et al., 2021). Teachers suggested that public incidents of cyberbullying would elicit more constructive bystander responses as the negative consequences are enhanced due to the increased visibility, which in turn, leads to bystanders disclosing bullying victimisation to teachers: 'sometimes it's not the person that's being bullied that blows the whistle, it's usually somebody else' (Macaulay et al., 2021, p. 16). In addition to publicity, the different degree of anonymity may also influence bystander decisions. While anonymity can refer to the extent individuals can conceal their identity from other individuals, whether that be other bystanders, victims, or perpetrators of bullying, the current study explores anonymity in terms of the perpetrator concealing their identity in a cyberbullying situation (Brody & Vangelisti, 2016). Prior research has explored the anonymity of the bystander in cyberbullying situations, with findings suggesting the positive role of anonymity in promoting bystander action as it provides additional confidence to report cyberbullying without the threat of retaliation and provides justification to remain passive (Wong-Lo & Bullock, 2014; You & Lee, 2019). However, one area that merits further attention is how young people respond to cyberbullying when the perpetrator has concealed their identity. Taken together, the current study hypothesised that there will be a difference in likelihood of bystander response according to the publicity and anonymity of cyberbullying.

In summary, the study examined (a) how young people perceive the severity of cyberbullying, and (b) how young people respond as a bystander according to different factors associated with cyberbullying.

2. Method

2.1. The current study

To explore the hypotheses, a series of hypothetical vignettes were developed to experimentally manipulate the variables of publicity, anonymity, type of cyberbullying, and victim response. This meant the variables could be presented in every combination. Participants were then asked to read the scenario carefully and respond to two items after each scenario. One item pertained to perceived severity of the scenario, while the other referred to likelihood to engage in different bystander responses. The items are outlined and described further in the Measures section.

2.2. Participants

A total of 1438 participants were recruited from two secondary schools and one college in England, United Kingdom during the 2018–2019 academic year. The data was cleaned, with incomplete responses removed. The nature of these incomplete responses involved participants providing informed consent but did not respond to any of the questions throughout the survey. The final sample was 990 participants (55.1% female) aged between 11 and 20 years ($M_{\text{age}} = 13.16$, $SD_{\text{age}} = 2.14$), with a 68.85% response rate. The sample comprised of 403 males (40.7%), 545 females (55.1%), and 42 participants preferred not to report their gender (4.2%). In terms of ethnicity, there were 780 (78.8%) White participants, 45 (4.5%) Asian participants, 21 (2.1%) Black or African participants, 76 (7.7%) participants responded to the 'other' category, and 68 (6.9%) participants preferred not to report their ethnicity.

The sample from the two secondary schools ($n = 808$, 80.6%) were aged 11 ($n = 218$, 22%), 12 ($n = 272$, 27.5%), 13 ($n = 212$, 21.4%), 14

($n = 90$, 9.1%), and 15 ($n = 16$, 1.6%) years of age. They are typical state-funded schools with around 1500 students from a range of socio-economic backgrounds. One college ($n = 182$, 17%) was also recruited as part of the final sample, with young people aged 16 ($n = 60$, 6.1%), 17 ($n = 74$, 7.5%), 18 ($n = 28$, 2.8%), 19 ($n = 13$, 1.3%), and 20 ($n = 7$, 0.7%). The school/college approximately holds 1500 pupils aged 11–20 years, but only the pupils enrolled in the college division were recruited. The sample were recruited from urban schools in England, the Midlands. The schools are rated 'good' to 'outstanding' by recent Ofsted reports with safeguarding measures meeting statutory requirements (Ofsted, 2019). Ofsted is the Office for Standards in Education, Children's Services and Skills in England. Ofsted is responsible for inspecting and regulating education and training for learners of all ages, and the services that care for young people. The primary role of Ofsted is to ensure that organisations providing education, training, and care services to children and young people do so to a high standard according to set criteria. For example, the Ofsted School Inspection Handbook requires schools to provide information and evidence on safeguarding and anti-bullying measures (Ofsted, 2019), where 'behaviour and safety' forms part of their inspection criteria. During these inspections, schools are expected to show the impact of their anti-bullying measures in addressing cyberbullying.

The anti-bullying policies for participating schools outline the definition of bullying, the different forms it can take, and signs and symptoms students may indicate if they are being bullied. The schools outline their responsibility to create and support an inclusive environment which promotes a culture of mutual respect for young people, provide opportunities for staff training to identify and manage bullying in the classroom, and provide a range of approaches for students, staff, and parents/guardians to access support or raise concerns. Regarding the anti-bullying curriculum participating students receive, the schools regularly collate the views of young people on the nature and extent of bullying, encourage students to report instances of bullying as soon as possible, highlight the range of sanctions which may be applied for engagement in bullying, and involve students in anti-bullying campaigns. The schools also promote an anti-bullying collaboration between schools, students, and parents/guardians, making sure that key information about bullying is available in a variety of formats.

In terms of anti-bullying procedures, students that are victims of bullying, or witness instances of it, are encouraged to report these to an adult, parent, or teacher as soon as possible. Students that witness someone being bullied are also encouraged to provide support to the victim (e.g., asking if they are OK), if it is safe to do so. Members of school staff must then report any case of bullying reported to them to the senior leadership team, where a 3Rs process is delivered to all those involved: Reflection (i.e., what has happened/could it have been different?), Resolution (i.e., how can we make sure this does not happen again?), and Reconciliation (i.e., how we put things right between those involved). More serious prolonged cases of bullying involve parental/guardian involvement to discuss the issue, and if necessary and appropriate, consultation with the police.

2.3. Measures

Like previous research (Macaulay et al., 2019; Menesini et al., 2011; Palladino et al., 2017), the use of hypothetical vignettes were employed to experimentally manipulate the nature of 'publicity', 'anonymity', 'type of cyberbullying', and 'victim response'. A total of 24 scenarios were created to manipulate these factors to occur in every combination. Table 1 shows the levels of each factor and the associated phrase used when it was present. Type of cyberbullying was categorised into visual or written forms as prior research has experimentally confirmed these two typologies for cyberbullying (Nocentini et al., 2010; Palladino et al., 2015, 2017). An example of a scenario to depict a public incident, where the bully was anonymous, involving a written-verbal type of cyberbullying, and when the victim was upset, was as follows:

Table 1
The factor, level and associated phrased used to manipulate each scenario.

Factor	Level	Phrase
Publicity	<i>Public</i>	they and everybody else (friends & others) could see this
	<i>Semi-public</i>	they and only their friends could see this
Anonymity	<i>Private</i>	only they could see this
	<i>Anonymous</i>	Someone they do not know
	<i>Not anonymous</i>	Someone they know
Type of cyberbullying	<i>Written verbal</i>	insulting text-based comment
	<i>Visual</i>	embarrassing photo/video
Victim response	<i>Upset</i>	This had upset them
	<i>Not upset</i>	This had not upset them

“A pupil received an insulting **text-based comment** from **someone they do not know** at their school. This happened digitally online. **They and everybody else (friends & others)** could see this. **This had upset them**”

As there were 24 scenarios presented to young people who may misinterpret how the scenarios differ, the phrase used to depict the presence of each factor was highlighted to avoid misinterpretation or confusion. The use of highlighting key text for retention and differentiation is reported in the literature to be effective (Fowler & Barker, 1974; Strobelt et al., 2015). After each scenario, participants were asked to complete two items: one pertaining to the perceived severity of the scenario, and the other measuring bystander responses to each scenario. These items remained the same for each scenario in order to measure how perceived severity and bystander responses may vary according to the level of publicity, anonymity, type of cyberbullying, and victim response.

Due to the number of scenarios participants were asked to respond to, teachers reiterated there was no time limit to complete the survey, and asked students to read each scenario carefully before responding to the questions. To avoid order and carry-over effects, the scenarios were presented randomly to each participant. In the scenarios and corresponding items, the bully and the victim are referred to as ‘the pupil’. The intention of this meant students could focus on the behaviour/situation, and not on the label. For example, Dweck (2008) notes how using labels can influence how young people view others, and labels such as ‘victims’ may send out a message of pity to the individual, when what they actually need is constructive bystander intervention to help stop the bullying.

2.3.1. Perceived severity

The purpose of Item 1 was to measure perceived severity for each scenario, exploring the hypotheses on perceived severity, whether there were any significant differences in perceived severity on cyberbullying scenarios according to publicity, anonymity, type of cyberbullying, and victim response. Item 1 read ‘Please rate how severe you deem this incident to be’. Item 1 was measured on a 5-point response set from (1) ‘not very severe’, (2) ‘a little severe’, (3) ‘neither severe or not severe’, (4) ‘fairly severe’ and (5) ‘very severe’. Item 1 is presented after each scenario. Cronbach’s alpha for perceived severity across the scenarios was high (0.951).

2.3.2. Bystander responses

The purpose of Item 2 was to measure likelihood to engage in different bystander responses, exploring the bystander responses hypothesis, whether there were any significant differences in bystander responses on cyberbullying scenarios according to publicity, anonymity, type of cyberbullying, and victim response. The responses were developed based on prior research exploring bystander reactions to bullying and/or cyberbullying incidents (Bastiaensens et al., 2014; Desmet et al.,

2014, 2012; Luo & Bussey, 2019; Macaulay et al., 2019; Machackova, 2020; Moxey & Bussey, 2020; Patterson et al., 2017; Van Cleemput et al., 2014). For instance, the range of bystander responses developed encapsulated the various bystander roles, including constructive victim-focused (e.g., provide emotional support to the victim), constructive bully-focused (e.g., intervene to tell the bully to stop), and passive (e.g., ignore what was happening) forms of intervention. In addition, the bystander responses developed are in line with current anti-bullying procedures at the participating schools, whereby if students witness a cyberbullying situation, school bullying policies encourage bystanders to report these to an adult, parent, or teacher as soon as possible. These policies also encourage bystanders to provide emotional support to the victim if it is safe to do so. The anti-bullying policies are in line with teacher recommendations on how to manage cyberbullying and mobilise constructive bystander intervention strategies (Macaulay et al., 2018, 2021; Redmond et al., 2020).

Item 2 read ‘If this came to your attention, how likely would you do the following’ with a. Ignore what was happening, b. Encourage the pupil that had sent the insulting comment/embarrassing photo/video, c. Seek help from a teacher/parent/guardian or trusted adult, d. Seek help from a friend, e. Provide emotional support for the pupil that had received the insulting comment/embarrassing photo/video, f. Directly intervene and challenge the pupil. Item 2 was also measured on a 5-point response set for each of the responses from (1) ‘extremely likely’, (2) ‘somewhat likely’, (3) ‘neither likely nor unlikely’, (4) ‘somewhat unlikely’ to (5) ‘extremely unlikely’. For Item 2, responses ‘b’ and ‘e’, the insulting comment/embarrassing photo/video was modified to match the context of the scenario. For example, if the scenario states ‘A pupil received an embarrassing photo/video from someone they know at their school’, statements (b) and (e) was modified to only include embarrassing photo/video. The same was applied if the scenario was based on the insulting comment. Item 2 is presented after each scenario. Cronbach’s alpha for bystander responses across the scenarios was high: ignore what was happening (0.971), encourage the pupil that had sent the insulting comment/embarrassing photo/video (0.979), seek help from a teacher/parent/guardian or trusted adult (0.979), seek help from a friend (0.973), provide emotional support for the pupil that had received the insulting comment/embarrassing photo/video (0.972), and directly intervene and challenge the pupil (0.983).

2.4. Procedure

Initially, consent was gained from the head teachers and/or principal. An information sheet detailing the nature and purpose of the research was distributed and sent to parents/guardians, who were asked to indicate if they do not wish their son/daughter to participate in the research by notifying the school/college. Regarding parental/guardian consent, the school policies and procedures were adhered to so that letters were sent home appropriately. No parents/guardians did not provide consent, and so all students took part in the study. As a contingency, if any parents/guardians did not provide consent, or participants themselves choose not to take part, students were informed they could use the time to carry on with other classwork/revision. The young people were invited to complete an online survey and completed the questionnaire on a class-by-class basis which aligned with the school/colleges anti-bullying curricula. The students were informed about the purpose of the research and were prompted to read an information sheet and check/tick the consent statements before they could access and start the survey. Participants were informed that they did not have to take part in the research, could withdraw at any time, and could withdraw their responses later by providing their unique identifiable number. No participants withdrew from the study. Teachers were briefed and administered the questionnaire. Teachers were always present, reported that all students participated in the survey, and no mocking took place. Teachers reported that no students felt uncomfortable. Participants had approximately 30–40 min to complete the questionnaire, which was

followed by a debrief form.

2.5. Design and data analysis

To explore the perceived severity hypotheses, whether there were any significant differences in perceived severity on cyberbullying scenarios according to publicity, anonymity, type of cyberbullying, and victim response, a 3 X 2 X 2 X 2 (Publicity [public, semi-public, private], Anonymity [anonymous, not anonymous], Type of cyberbullying [written-verbal, visual], Victim response [upset, not upset]) within-subjects ANOVA was performed. The factors of publicity, anonymity, type of cyberbullying and victim response were the repeated measures. The perceived severity score for each scenario acted as the dependent variable.

To explore the bystander responses hypothesis, whether there were any significant differences for each response category, six separate 3 X 2 X 2 X 2 (Publicity [public, semi-public, private], Anonymity [anonymous, not anonymous] Type of cyberbullying [written-verbal, visual], Victim response [upset, not upset]) within-subjects ANOVA were performed. The factors of publicity, anonymity, type of cyberbullying, and victim response were the repeated measures. The dependent variable changed according to each ANOVA based on the six responses participants responded to. These responses were re-coded such that a higher mean represented a greater likelihood to engage in that behaviour. The assumptions of ANOVA were tested (Cardinal & Aitken, 2006), which found the data was not normally distributed. Despite this, the ANOVAs were still conducted because the ANOVA and F statistic are known to be robust to violations of this assumption (Black et al., 2010; Ferreira et al., 2012; Lantz, 2013), especially in large samples where alternative solutions such as data transformations offer no additional benefit to reducing type 1 error (Blanca Mena et al., 2017; Winer et al., 1971). Violations of sphericity were dealt with using the Greenhouse-Geisser correction.

MANOVA was considered to examine the likelihood of each bystander response across the scenarios. Van der Ploeg et al. (2017) recommended sub-dividing bystander intervention strategies to gain a deeper understanding on specific bystander responses. As such, the research was exploratory in nature, with the aim to examine the individual bystander responses to each scenario, according to the publicity, anonymity, type of cyberbullying and victim response. The current study was interested in examining these individual variables, and not the difference across a combination of these, so a series of separate within-subjects ANOVAs was performed (Frane, 2015; Huberty & Morris, 1992). Due to the number of statistical tests performed and the sensitivity for type 1 errors, a stricter significance level of $p < .01$ was implemented throughout the analysis, to provide more confidence when reporting differences (Baguley, 2012; Benjamin & Berger, 2019; Thiese et al., 2016). This approach has been recommended when conducting multiple tests (Frane, 2015; Huberty & Morris, 1992), and so an adjustment to alpha was made in the current study. Partial eta squared (η^2) was used to determine effect size following Cohen's (1988) small ($\eta^2 = 0.01$), medium ($\eta^2 = 0.06$), and large ($\eta^2 = 0.14$) effect level recommendations.

Age and gender effects were examined for perceived severity, and each of the bystander responses, but no significant differences between the groups were found (all $p > .05$). Hence, age and gender did not feature in any results presented below. In addition, school/class effects were not controlled for as there was some changing of class membership during the data collection process.

3. Results

3.1. Perceived severity of cyberbullying

Table 2 contains the descriptive statistics for perceived severity across scenarios. Young people perceived cyberbullying to be the most serious when in the public domain, perpetrated anonymously, where the

Table 2

The mean and standard deviation (SD) on perceived severity across scenarios.

Scenario	Publicity	Anonymity	Type of Cyberbullying	Victim Response	Perceived Severity
✓3	Public	Anonymous	Visual	Upset	4.40 (.89)
7	Public	Not Anonymous	Visual	Upset	4.33 (.91)
1	Public	Anonymous	Written Verbal	Upset	4.32 (.90)
5	Public	Not Anonymous	Written Verbal	Upset	4.26 (.95)
11	Semi-Public	Anonymous	Visual	Upset	4.10 (.96)
19	Private	Anonymous	Visual	Upset	4.09 (.96)
9	Semi-Public	Anonymous	Written Verbal	Upset	4.07 (.93)
17	Private	Anonymous	Written Verbal	Upset	4.02 (.99)
15	Semi-Public	Not Anonymous	Visual	Upset	4.01 (.97)
21	Private	Not Anonymous	Written Verbal	Upset	3.99 (.97)
13	Semi-Public	Not Anonymous	Written Verbal	Upset	3.98 (.96)
23	Private	Not Anonymous	Visual	Upset	3.95 (1.04)
4	Public	Anonymous	Visual	Not Upset	3.36 (1.16)
2	Public	Anonymous	Written Verbal	Not Upset	3.36 (1.14)
8	Public	Not Anonymous	Visual	Not Upset	3.32 (1.19)
6	Public	Not Anonymous	Written Verbal	Not Upset	3.25 (1.15)
12	Semi-Public	Anonymous	Visual	Not Upset	3.12 (1.20)
10	Semi-Public	Anonymous	Written Verbal	Not Upset	3.04 (1.13)
20	Private	Anonymous	Visual	Not Upset	3.01 (1.23)
14	Semi-Public	Not Anonymous	Written Verbal	Not Upset	3.00 (1.16)
18	Private	Anonymous	Written Verbal	Not Upset	2.99 (1.93)
16	Semi-Public	Not Anonymous	Visual	Not Upset	2.95 (1.20)
22	Private	Not Anonymous	Written Verbal	Not Upset	2.88 (1.22)
✓✓24	Private	Not Anonymous	Visual	Not Upset	2.81 (1.24)

Note: ✓Highest perceived severity ✓✓Lowest perceived severity. Perceived severity was measured on a 1–5 scale, with higher scores indicating greater perceived severity for each scenario.

type of cyberbullying was visual based (e.g., embarrassing photos/videos), and the victim was upset. In comparison, young people perceived cyberbullying to be the least serious when it occurred privately, the perpetrator was not anonymous, the type of cyberbullying was visual based, and the victim was not upset.

There were several statistically significant findings for perceived severity, as listed in Table 3. Perceived severity did vary according to the publicity level of cyberbullying. Pairwise comparisons adjusted using the Bonferroni correction showed a significant difference in severity scores between each pair of publicity level, all $p < .001$. Severity scores were greater for public ($M = 3.83$) than semi-public ($M = 3.55$) and private ($M = 3.48$) incidents of cyberbullying, with a significant difference between semi-public and private. The results also indicated that the level of severity was higher when the bully was anonymous ($M = 3.67$), than when the identity of the bully was known to the victim ($M = 3.58$), $p < .001$. Perceived severity did not differ between visual and verbal types of cyberbullying. Perceived severity did vary according to victim response. Perceived severity was greater when the victim was upset ($M = 4.14$), than when the victim was not upset ($M = 3.10$), $p <$

Table 3

ANOVA summary table for differences in perceived severity according to publicity, anonymity, type of cyberbullying and victim response.

Variable	Source	SS	df	MS	F	p	η^2
Perceived severity	*Publicity	462.92	1.76	262.85	294.64	<.001	.262
	Anonymity	40.39	1.00	40.39	47.64	<.001	.054
	Type of CB	4.43	1.00	4.43	5.59	.018	.007
	Victim response	5404.07	1.00	5404.07	1874.83	<.001	.693
	*Publicity x victim response	9.17	2.00	4.59	9.26	<.001	.011

Note: SS sums of square, MS mean squares, *Huynh-Feldt correction reported.

.001.

There was a significant two-way interaction between publicity and victim response on perceived severity to cyberbullying. There was a significant difference in perceived severity scores across public (upset: $M = 4.34$; not upset: $M = 3.33$), semi-public (upset: $M = 4.05$; not upset: $M = 3.04$), and private (upset: $M = 4.03$; not upset: $M = 2.93$). For both types of victim response, there was a significant difference between each pair of publicity level, all $p < .001$. Fig. 1 shows the interaction between publicity and victim response on perceived severity. The interaction shows that public incidents of cyberbullying where the victim was upset were perceived more severe than semi-public and private incidents, and all levels of publicity were regarded as less severe when the victim was not upset compared to upset.

3.2. Bystander responses to cyberbullying

Table 4 contains the descriptive statistics for likelihood to engage in each bystander response across scenarios.

Six separate 3 X 2 X 2 X 2 X 2 (Publicity [public, semi-public, private] Anonymity [anonymous, not anonymous], Type of cyberbullying [written-verbal, visual], Victim response [upset, not upset]) within-subjects ANOVA were performed to explore each of the bystander responses. There were several statistically significant findings for each bystander response, as listed in Table 5.

Likelihood to ignore the situation did vary as a function of publicity and victim response. For publicity, pairwise comparisons adjusted using the Bonferroni correction showed a significant difference in ignore scores between each pair of publicity level, $p < .001$, with the exception between semi-public and private incidents of cyberbullying. Ignore scores were lower for public ($M = 2.18$) than semi-public ($M = 2.30$) and private ($M = 2.31$) incidents of cyberbullying, although ignore scores were similar between semi-public and private cyberbullying. For victim response, contrasts revealed that ignore scores were greater when the victim was not upset ($M = 2.52$), than when the victim was upset ($M = 2.00$). For higher order effects, there was a significant two-way

interaction between publicity and victim response for likelihood to ignore the situation. There was a significant difference in ignore scores across public (upset: $M = 1.94$; not upset: $M = 2.42$), semi-public (upset: $M = 2.05$; not upset: $M = 2.55$), and private (upset: $M = 2.02$; not upset: $M = 2.61$). For both types of victim response, there was a significant difference between each pair of publicity level, all $p < .001$. Fig. 2 shows the interaction between publicity and victim response on likelihood to ignore what was happening. The interaction shows that across all levels of publicity, young people were more likely to ignore what was happening when the victim was not upset compared to when the victim was upset.

Likelihood to encourage the bully varied as a function of victim response ($p < .001$). The contrasts revealed that encourage scores were greater when the victim was not upset ($M = 1.60$), than when the victim was upset ($M = 1.56$). There were no significant higher order effects.

Likelihood to seek help from an adult varied as a function of publicity, anonymity, and victim response. For publicity, pairwise comparisons adjusted using the Bonferroni correction showed a significant difference in seek adult help scores between each pair of publicity level, $p < .001$, with the exception between semi-public and private incidents of cyberbullying. Seeking help from an adult to help the victim was higher in public ($M = 3.70$) cyberbullying scenarios, than semi-public ($M = 3.60$), or private incidents ($M = 3.57$), but seeking adult help did not significantly differ between semi-public and private incidents. For anonymity, seeking help from an adult to help the victim was greater when the bully was anonymous ($M = 3.65$), compared when the bully was not anonymous ($M = 3.59$), $p < .001$. For victim response, contrasts revealed that seeking adult support was greater when the victim was upset ($M = 3.86$), than if the victim was not upset ($M = 3.39$), $p < .001$. For higher order effects, there was a significant two-way interaction between anonymity and victim response for likelihood to seek adult help ($p < .001$). There was a significant difference in seeking adult help for the victim when the bully was anonymous (upset: $M = 3.88$; not upset: $M = 3.43$), and when the bully was not anonymous (upset: $M = 3.85$; not upset: $M = 3.34$). Fig. 3 shows the interaction between anonymity and victim response on likelihood to seek help from an adult for the victim. The interaction shows that young people were more likely to seek adult help when the bully was anonymous, and the victim was upset. The anonymity of the bully is more important in determining when young people seek adult help when the victim is not upset.

Likelihood to seek help from a friend varied as a function of publicity, anonymity, type of cyberbullying, and victim response. For publicity, pairwise comparisons adjusted using the Bonferroni correction showed a significant difference in seek friend help scores between each pair of publicity level, $p < .001$. Seeking help from a friend to help the victim was higher in public ($M = 3.67$) cyberbullying scenarios, than semi-public ($M = 3.60$), or private incidents ($M = 3.56$). For anonymity, contrasts revealed the likelihood to seek help from a friend to help the victim was greater when the bully was anonymous ($M = 3.63$), compared to when the bully was not anonymous ($M = 3.59$), $p < .005$. For type of cyberbullying, the likelihood to seek friend support for the victim was greater for written verbal ($M = 3.62$) than visual ($M = 3.59$) types of cyberbullying, $p < .01$. For victim response, contrasts revealed that seeking friend support was greater when the victim was upset ($M = 3.81$), than when the victim was not upset ($M = 3.41$), $p < .001$. There

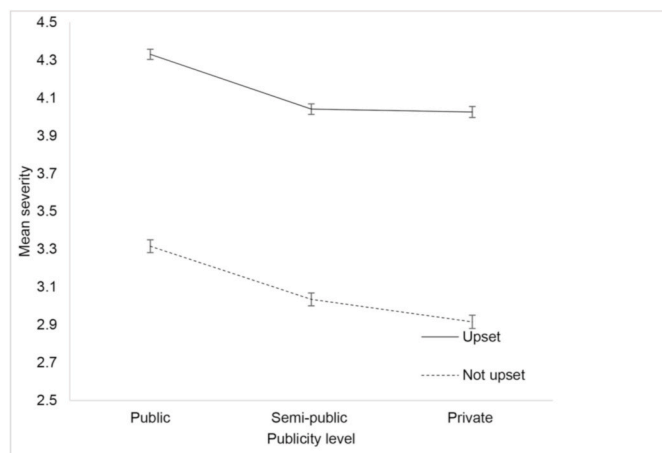


Fig. 1. The interaction between publicity and victim response on perceived severity (with 99% confidence intervals).

Table 4
The mean and standard deviation (SD) for each type of response towards cyberbullying.

Scenario	Type of response					
	Ignore	Encourage	Adult support	Friend support	Emotional support	Intervene
1 [Public, Anonymous, Written Verbal, Upset]	✓✓1.96 (1.25)	1.65 (1.25)	3.85 (1.24)	✓3.83 (1.15)	✓4.07 (1.16)	2.48 (1.36)
2 [Public, Anonymous, Written Verbal, Not Upset]	2.42 (1.29)	1.66 (1.22)	3.34 (1.24)	3.46 (1.14)	3.60 (1.20)	2.27 (1.29)
3 [Public, Anonymous, Visual, Upset]	1.97 (1.26)	1.64 (1.25)	✓3.90 (1.24)	3.80 (1.17)	4.01 (1.21)	2.46 (1.36)
4 [Public, Anonymous, Visual, Not Upset]	2.46 (1.30)	1.65 (1.20)	3.44 (1.22)	3.42 (1.14)	3.56 (1.20)	2.27 (1.29)
5 [Public, Not Anonymous, Written Verbal, Upset]	1.97 (1.26)	1.59 (1.19)	3.85 (1.21)	3.82 (1.12)	✓4.07 (1.15)	✓2.55 (1.37)
6 [Public, Not Anonymous, Written Verbal, Not Upset]	2.49 (1.28)	1.65 (1.22)	3.35 (1.23)	3.40 (1.13)	3.50 (1.22)	2.33 (1.29)
7 [Public, Not Anonymous, Visual, Upset]	1.97 (1.27)	1.61 (1.22)	3.85 (1.22)	3.81 (1.14)	4.02 (1.20)	2.52 (1.35)
8 [Public, Not Anonymous, Visual, Not Upset]	2.43 (1.30)	1.63 (1.20)	3.38 (1.22)	3.39 (1.13)	3.52 (1.21)	2.27 (1.29)
9 [Semi-Public, Anonymous, Written Verbal, Upset]	2.12 (1.28)	1.62 (1.21)	3.71 (1.22)	3.72 (1.15)	3.97 (1.20)	2.38 (1.32)
10 [Semi-Public, Anonymous, Written Verbal, Not Upset]	2.56 (1.30)	1.65 (1.20)	3.35 (1.23)	3.38 (1.14)	3.49 (1.18)	2.25 (1.27)
11 [Semi-Public, Anonymous, Visual, Upset]	2.07 (1.26)	1.63 (1.21)	3.81 (1.20)	3.74 (1.13)	4.02 (1.14)	2.34 (1.32)
12 [Semi-Public, Anonymous, Visual, Not Upset]	2.53 (1.29)	1.63 (1.16)	3.36 (1.25)	3.37 (1.14)	3.54 (1.23)	2.24 (1.26)
13 [Semi-Public, Not Anonymous, Written Verbal, Upset]	2.09 (1.23)	1.61 (1.21)	3.72 (1.21)	3.73 (1.12)	3.96 (1.17)	2.44 (1.34)
14 [Semi-Public, Not Anonymous, Written Verbal, Not Upset]	2.57 (1.28)	1.62 (1.19)	3.32 (1.23)	3.37 (1.14)	3.49 (1.23)	2.27 (1.30)
15 [Semi-Public, Not Anonymous, Visual, Upset]	2.09 (1.26)	1.63 (1.20)	3.75 (1.23)	3.75 (1.14)	3.96 (1.15)	2.47 (1.32)
16 [Semi-Public, Not Anonymous, Visual, Not Upset]	2.62 (1.31)	1.65 (1.17)	3.25 (1.23)	3.29 (1.14)	3.45 (1.26)	2.22 (1.28)
17 [Private, Anonymous, Written Verbal, Upset]	2.05 (1.23)	✓✓1.57 (1.18)	3.76 (1.24)	3.75 (1.13)	3.99 (1.16)	2.41 (1.34)
18 [Private, Anonymous, Written Verbal, Not Upset]	2.58 (1.29)	1.66 (1.20)	3.30 (1.28)	3.35 (1.13)	3.53 (1.20)	2.25 (1.28)
19 [Private, Anonymous, Visual, Upset]	2.05 (1.22)	✓✓1.57 (1.17)	3.76 (1.22)	3.72 (1.13)	4.03 (1.13)	2.35 (1.32)
20 [Private, Anonymous, Visual, Not Upset]	2.59 (1.31)	1.63 (1.18)	3.33 (1.26)	3.30 (1.15)	3.49 (1.21)	✓✓2.21 (1.27)
21 [Private, Not Anonymous, Written Verbal, Upset]	2.07 (1.25)	1.65 (1.24)	3.70 (1.23)	3.70 (1.13)	3.99 (1.16)	2.44 (1.35)
22 [Private, Not Anonymous, Written Verbal, Not Upset]	2.65 (1.34)	1.63 (1.18)	3.28 (1.25)	3.33 (1.14)	3.46 (1.23)	2.22 (1.28)
23 [Private, Not Anonymous, Visual, Upset]	2.05 (1.23)	1.60 (1.18)	3.75 (1.24)	3.68 (1.14)	3.96 (1.18)	2.42 (1.32)
24 [Private, Not Anonymous, Visual, Not Upset]	✓2.64 (1.35)	✓1.70 (1.21)	✓✓3.16 (1.30)	✓✓3.22 (1.19)	✓✓3.38 (1.22)	✓✓2.21 (1.28)

Note: ✓Highest likelihood ✓✓Lowest likelihood. Bystander responses was measured on a 1-5 scale, with higher scores indicating greater likelihood to engage in each bystander response for each scenario.

Table 5
ANOVA summary table for differences on bystander responses according to publicity, anonymity, type of cyberbullying, and victim response.

Variable	Source	SS	df	MS	F	p	η ²
Ignore the situation	*Publicity	66.67	1.90	35.11	44.82	<.001	.055
	Anonymity	1.34	1.00	1.34	1.90	.168	.002
	Type of CB	.314	1.00	.314	.417	.519	.001
	Victim response	1263.35	1.00	1263.35	502.28	<.001	.396
	*Publicity x victim response	10.73	1.99	5.40	10.11	<.001	.013
Encourage the bully	*Publicity	.173	1.96	.088	.193	.820	.000
	Anonymity	.268	1.00	.268	.585	.445	.001
	Type of CB	.408	1.00	.408	.839	.360	.001
	Victim response	7.27	1.00	7.27	10.94	<.001	.015
	*Publicity x victim response	51.97	1.93	26.95	52.72	<.001	.064
Seek adult help	Anonymity	17.27	1.00	17.27	32.86	<.001	.041
	Type of CB	.523	1.00	.523	.865	.353	.001
	Victim response	1040.99	1.00	1040.99	475.36	<.001	.381
	Anonymity x victim response	4.73	1.00	4.73	10.50	<.001	.013
	*Publicity	33.84	1.94	17.43	34.10	<.001	.042
Seek friend help	Anonymity	4.98	1.00	4.98	9.82	<.005	.013
	Type of CB	3.85	1.00	3.85	7.81	<.01	.010
	Victim response	780.93	1.00	780.93	380.39	<.001	.329
	*Publicity	15.92	1.95	8.18	16.42	<.001	.021
	Anonymity	10.42	1.00	10.42	22.52	<.001	.029
Provide emotional support	Type of CB	.604	1.00	.604	1.30	.255	.002
	Victim response	1263.18	1.00	1263.18	429.05	<.001	.361
	Anonymity x victim response	3.98	1.00	3.98	8.48	<.01	.011
	*Publicity	22.53	1.94	11.62	20.79	<.001	.031
	Anonymity	10.33	1.00	10.33	14.97	<.001	.022
Challenge the bully	Type of CB	1.31	1.00	1.31	2.73	.099	.004
	Victim response	140.93	1.00	140.93	108.26	<.001	.142
	Anonymity x victim response	5.85	1.00	5.85	11.27	<.001	.017

Note: SS sums of square, MS mean squares, *Huyhn-Feldt correction reported.

were no significant higher order effects.

Likelihood to provide emotional support for the victim varied as a function of publicity, anonymity, and victim response. For publicity, pairwise comparisons adjusted using the Bonferroni correction showed a significant difference in emotional support scores between each pair of publicity level, $p < .001$, except for semi-public and private, non-significant. Providing emotional support for the victim was higher in public ($M = 3.88$) cyberbullying scenarios, than semi-public ($M = 3.83$),

or private incidents ($M = 3.81$), with the latter two prompting similar responses. For anonymity, likelihood to provide emotional support for the victim was greater when the bully was anonymous ($M = 3.86$), compared to when the bully was not anonymous ($M = 3.82$), $p < .001$. For victim response, contrasts revealed that emotional support was greater when the victim was upset ($M = 4.10$), than if the victim was not upset ($M = 3.58$), $p < .001$. For higher order effects, there was a significant two-way interaction between anonymity and victim response (p

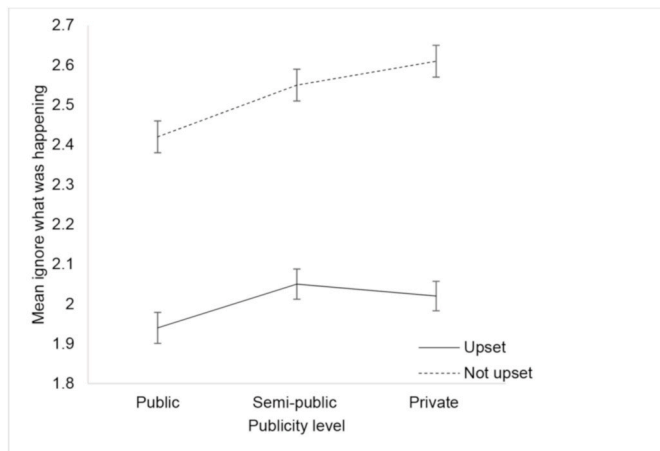


Fig. 2. The interaction between publicity and victim response on ignore what was happening (with 99% confidence intervals).

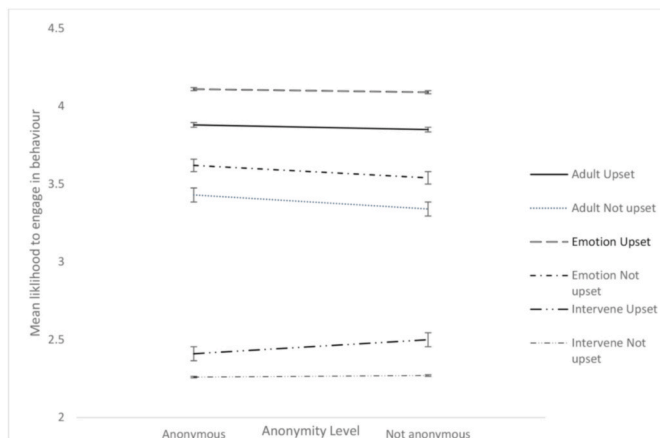


Fig. 3. The interaction between anonymity and victim response on likelihood to a. seek adult help, b. provide emotional support, and c. intervene to challenge the bully (with 99% confidence intervals).

< .01). There was a significant difference in providing emotional support to the victim when the bully was anonymous (upset: $M = 4.11$; not upset: $M = 3.62$), and when the bully was not anonymous (upset: $M = 4.09$; not upset: $M = 3.54$). Fig. 3 shows the interaction between anonymity and victim response on likelihood to provide emotional support to the victim. The interaction shows that young people were more likely to provide emotional support for the victim when the bully was anonymous, and the victim was upset.

Likelihood to intervene and challenge the bully varied as a function of publicity, anonymity, and victim response. For publicity, pairwise comparisons adjusted using the Bonferroni correction showed a significant difference in intervene scores between each pair of publicity level, $p < .001$, with the exception between semi-public and private incidents of cyberbullying. Intervene scores were higher for public ($M = 2.41$) than semi-public ($M = 2.35$) and private ($M = 2.32$) incidents of cyberbullying, although intervene scores were similar between semi-public and private cyberbullying. For anonymity, likelihood to intervene and challenge the bully was greater when the bully was not anonymous ($M = 2.38$), compared to when the bully was anonymous ($M = 2.33$), $p < .001$. For victim response, contrasts revealed that intervene scores were greater when the victim was upset ($M = 2.45$), than if the victim was not upset ($M = 2.26$), $p < .001$. For higher order effects, there was a significant two-way interaction between anonymity and victim response ($p < .001$). There was a significant difference in intervene

scores when the bully was anonymous (upset: $M = 2.41$; not upset: $M = 2.26$), and when the bully was not anonymous (upset: $M = 2.50$; not upset: $M = 2.27$). Fig. 3 shows the interaction between anonymity and victim response on likelihood to intervene and challenge the bully. The interaction shows that young people were more likely to intervene and challenge the bully when the victim was upset, and the bully was not anonymous.

4. Discussion

The current study examined how young people aged 11–20 years from the Midlands, England perceived the severity of cyberbullying, and to what extent they responded as a bystander based on factors associated with cyberbullying.

In response to the hypotheses on perceived severity, the study found main effects for publicity, anonymity, and victim response respectively, but not for the hypothesis on the type of cyberbullying on the perceived severity of cyberbullying. Young people were more likely to perceive public forms of cyberbullying as more severe, followed by semi-public and private forms. Public acts of cyberbullying have the potential to be distributed to a wider audience and increase the negative impact for the victim (Kowalski & Limber, 2007; Nocentini et al., 2010). As such, young people may perceive such victimisation via public domains more severely due to the perceived greater impact. This is consistent with prior literature suggesting young people attribute higher severity for public forms of cyberbullying as more severe (Dredge et al., 2014; Nocentini et al., 2010; Pieschl et al., 2015), compared to semi-public or private forms of cyberbullying. Regarding anonymity, perceived severity of the situation was higher when the bully was anonymous. This supports literature showing how anonymity in bullying can lead to fear, powerlessness, and lack of control (Dooley et al., 2009; Nocentini et al., 2010; Slonje & Smith, 2008; Vandebosch & Van Cleemput, 2008). In addition, young people reported higher levels of perceived severity when the victim was identified as being upset. A prior systematic review has identified how the feelings of the victim can influence the perceived severity of cyberbullying (Domínguez-Hernández et al., 2018). For example, constructive bystander intervention strategies are prompted when the victim was upset by their victimisation (Macaulay et al., 2019). This suggests that publicity, anonymity, and victim response play an important role in the perceived severity of cyberbullying.

These findings on perceived severity are consistent with previous literature, attributing the increased distress and anxiety when exposed publicly (Nocentini et al., 2010; Pieschl et al., 2015; Ševčíková et al., 2012), and feelings of isolation and fear when the victim did not know the identity of the perpetrator (Corby et al., 2016; Dredge et al., 2014; Vandebosch et al., 2014). The finding that the type of cyberbullying did not impact on the perceived severity of cyberbullying contradicts previous research into this area reporting visual forms of cyberbullying to be more severe than written verbal (Menesini et al., 2011; Pieschl et al., 2013; Slonje & Smith, 2008; Smith et al., 2006, 2008). This indicates that young people may value specific characteristics of cyberbullying as more important in determining the severity of the situation, than the actual type of cyberbullying perpetrated. This is a positive notion as it suggests young people are equally likely to view visual and written verbal forms of cyberbullying as severe. In terms of anti-bullying policies and initiatives, this suggests schools should further emphasise the unique characteristics of cyberbullying (e.g., the publicity and anonymity) to educate young people how these characteristics are used to target victims in different ways. The current study suggests young people view different forms of cyberbullying as severe, so a focus on highlighting the unique characteristics of cyberbullying will provide a foundation for young people to recognise that regardless of the unique characteristics of a situation, all cases of cyberbullying merit constructive bystander intervention strategies, as involvement can lead to an array of negative consequences (Heiman et al., 2015; Hinduja & Patchin, 2019; Wolke et al., 2017).

Regarding bystander responses, findings support the bystander responses hypothesis that there are differences in likelihood of engaging in each response strategy, where victim response was found to be the most influential factor, followed by the publicity, anonymity of the bully, and type of cyberbullying on how young people aged 11–20 years from the Midlands, England responded to cyberbullying. Addressing likelihood to ignore the incident, main effects were found for publicity and victim response, but not for anonymity and type of cyberbullying. Young people were more likely to ignore what was happening when the cyberbullying was semi-public or private, but significantly less likely to ignore those acts that were public. As young people perceive private and semi-public forms of cyberbullying to be less severe than incidents in the public domain, this suggests young people could choose to ignore these incidents (Bastiaensens et al., 2014; Koehler & Weber, 2018). In addition, young people were more likely to ignore the situation when the victim was described as not being upset. This suggests that the publicity of cyberbullying and how the victim responds are important factors that could influence if young people choose to ignore cyberbullying or not. These two main effects also interacted whereby ignore scores increased across all levels of publicity when the victim was not upset from their victimisation. Young people may lack the relevant skills and knowledge to intervene constructively, as identified in prior research (DeSmet et al., 2012, 2014; Van Cleemput et al., 2014). For example, young people may choose to ignore the incident if they perceive the situation to be resolved, or others have already intervened (DeSmet et al., 2012, 2014). This suggests schools need to implement initiatives in their anti-bullying curricula to encourage young people to stop being a passive bystander and instead foster constructive victim-focused and constructive bully-focused bystander intervention strategies. In line with current anti-bullying policies outlined in the Participants section, schools could ask students to create poster campaigns on why not to be a passive bystander, while highlighting different constructive focused strategies young people could employ. These can then be presented in the classrooms and showcased in the school corridors to promote a wider message across the school environment, fostering a positive school climate where students respect each other and have the knowledge on how to be a constructive bystander to cyberbullying.

Examining likelihood to encourage the bully, the study found a main effect for victim response, but not for publicity, anonymity, or type of cyberbullying. As such, young people were more likely to encourage the bully if the victim was not upset, suggesting the importance of this factor when young people decide if to encourage the bully. From a theoretical perspective, due to the minimisation of authority in the online domain, and the notion of asynchronicity as actions have no immediate consequences online, it is possible young people are more likely to encourage the bully and escalate the situation (Bryce & Fraser, 2013; Suler, 2004). The notion of online disinhibition suggests young people separate their actions online to real life interactions. For example, this suggests young people are more likely to encourage the bully online because they have the invisible barrier of anonymity, allowing them to feel more confident online to do things they would not necessarily do in the physical world (Bryce & Fraser, 2013; Suler, 2004). As a result, young people may inaccurately misjudge how the victim is feeling. Schools should encourage students to show their emotion if they are a victim of cyberbullying as a strategy to mobilise constructive bystander support.

Regarding likelihood to seek help from an adult, main effects were found for publicity, anonymity, and victim response, but not type of cyberbullying. While there was no difference in seeking adult help to support the victim between semi-public and private incidents of cyberbullying, there were higher levels of adult help in public acts of cyberbullying. As young people perceive public acts of cyberbullying to be more severe than semi-public or private acts of cyberbullying, this could explain why young people are more likely to seek help from an adult in these cases (Chen & Cheng, 2017). In addition, young people were more likely to seek adult help when the bully was anonymous in the situation. Regarding victim response, seeking adult help to support the victim was

higher when young people witnessed the victim was upset. This suggests the publicity, anonymity, and victim response are important factors to consider when young people decide to seek adult help. Despite young people recognising cyberbullying as a serious issue (Bryce & Fraser, 2013), a majority continue to do nothing (Balakrishnan, 2018). In addition, some young people are less likely to seek help from a teacher/adult when they perceived teachers to lack the skills and confidence to address the issue (Bauman, 2010; Blake & Louw, 2010). Schools should encourage young people to have open discussions with teachers and parents about cyberbullying, to facilitate an environment where young people disclose not only their victimisation, but also seek adult help for the victimisation of others. However, students are often not receptive to anti-bullying policies or curricula because they do not engage them (Cunningham et al., 2016), so schools should provide more opportunities for students to participate in anti-bullying content and give students the voice to feed into the anti-bullying policy, so students feel part of something they themselves have created.

The study found main effects for publicity, anonymity, type of cyberbullying, and victim response when young people aged 11–20 years from the Midlands, England were reporting on the likelihood to seek help from a friend to support the victim. In terms of publicity, young people were more likely to seek help from a friend to support the victim for public incidents, followed by semi-public, and private cases of cyberbullying. Regarding anonymity, when the bully was anonymous, young people were more likely to seek help from a friend compared to when the bully was known. In addition, young people were more likely to seek help from a friend when the type of cyberbullying was written verbal, compared to visual cyberbullying. Previous literature suggests visual forms of cyberbullying are more humiliating for the victim (Menesini et al., 2011; Pieschl et al., 2013; Slonje & Smith, 2008; Smith et al., 2008), and so suggests more needs to be done to promote positive intervention. In terms of the victim response, young people were more likely to seek help from a friend to help the victim when the victim was upset. This suggests all four factors of publicity, anonymity, type of cyberbullying, and victim response are important to consider when young people decide when to seek help from a friend. This is a positive finding, because it suggests young people are more likely to seek social support and help from a peer/friend when they witness cyberbullying, across all factors examined in the current study. As seeking social support is an effective strategy to address cyberbullying (Pabian, 2019), young people need to be reminded to report cyberbullying and seek help from friends and trusted adults. In terms of anti-bullying policies and initiatives, these can be taken in the form of a peer support service or buddy system, which have been helpful supporting victims deal with negative emotions (Cowie, 2011).

When examining any differences on likelihood to provide emotional support for the victim, main effects were found for publicity, anonymity, and victim response. Young people aged 11–20 years from the Midlands, England were more likely to provide emotional support for the victim when the victim was targeted via a public domain. Considering anonymity, emotional support for the victim increased when the bully was anonymous. Regarding victim response, emotional support increased when the victim was upset, compared to when the victim was not upset. This suggests young people consider the publicity of the incident, the extent the bully is anonymous, and if the victim is upset when deciding if to provide emotional support for the victim. This is important because providing emotional support for the victim is an effective strategy young people adopt when they witness cyberbullying online (Bastiaensens et al., 2019; Machackova et al., 2015). When young people provide emotional support, they discuss the cyberbullying incident with the victim, and provide the victim coping strategies (Bastiaensens et al., 2019) to help them overcome the negative consequences (Kowalski et al., 2017).

In terms of likelihood to intervene to challenge the bully, main effects were found for publicity, anonymity, and victim response. Young people aged 11–20 years from the Midlands, England were more likely

to intervene to challenge the bully when the cyberbullying was public, with no significant difference between semi-public and private incidents. In addition, young people were more likely to challenge the bully when the bully was anonymous. Considering the victim response, young people were more likely to intervene and challenge the bully when the victim was upset. As such, factors of publicity, anonymity, and victim response play a role in how young people decide if to intervene and challenge the bully. These findings support prior research suggesting young people would intervene to support victims of cyberbullying (Dillon & Bushman, 2015; Huang & Chou, 2013).

In Summary, the factor of victim response was found to be significant across all response strategies, where young people were more likely to ignore the situation and encourage the bully when the victim was not upset, but more likely to seek adult or friend support, provide emotional support for the victim, and intervene to challenge the bully when the victim was upset. This suggests that the victim response of being upset or not upset from cyberbullying plays an important role in how young people choose to respond. The factor of publicity was the second most influential factor, being significant for all response strategies except likelihood to encourage the bully. Young people were less likely to ignore public incidents of cyberbullying compared to semi-public or private incidents but were more likely to seek adult or friend support, provide emotional support for the victim, and intervene to challenge the bully for public incidents of cyberbullying. This suggests that the public nature of cyberbullying has an influential role in how young people choose to respond.

The factor of anonymity was important across all proactive strategies (e.g., seek adult help, friend help, emotional support, challenge bully), but was not a significant factor for likelihood to ignore the situation and encourage the bully. Young people were more likely to seek adult or friend support, provide emotional support for the victim, and intervene to challenge the bully when the bully was anonymous, compared to not being anonymous. This suggests the role of anonymity is an important factor for proactive strategies when young people choose how to respond. In terms of type of cyberbullying, this was the least influential factor on response strategies, only significant for seeking help from a friend. Young people were more likely to seek help from a friend when they witnessed a written verbal cyberbullying incident compared to a visual incident. However, the type of cyberbullying was not significant for any other response strategy.

5. Implications

The findings suggest that young people aged 11–20 years from the Midlands, England do respond differently to cyberbullying, with victim response being the most influential factor, followed by publicity, anonymity, and type of cyberbullying.

These findings have implications for anti-bullying policies in schools. Consecutive Governments in England have introduced legislation and statutory guidance to address the welfare of young people. By law, all state schools must have a policy in place that includes measures to manage all forms of bullying among pupils, although the content of this policy is decided at the school level (Department for Education, 2017). All schools need to have an implemented anti-bullying policy to address bullying related issues in the school environment (Education and Inspections Act 2006, 2006). While policies are decided at the school level, the Department for Education (DfE) have produced guidance for all schools in England, which outlines its duties towards preventing and tackling bullying in schools (Department for Education, 2017). For example, the DfE have provided guidance for all school staff and pastoral members of the school with appropriate guidance on supporting children and young people that have been affected by cyberbullying. These guidelines provide support for school staff to identify the adverse outcomes of cyberbullying, promoting the welfare of young people in the school. Findings from the current study show that how the victim responds to being cyberbullied (i.e., if they show that there are upset or

not), is the most influential factor for fostering constructive bystander intervention strategies and reducing passive and/or bully supportive responses. One recommendation when schools review their anti-bullying policies is to include curricula focused on recognising the signs when someone is upset in a bullying context. Related to this, schools should foster an environment where students are encouraged to show and talk about their emotions. This can be facilitated in the classroom using role play scenarios to get students to think how someone would feel if they were a victim of bullying, or how the victim would feel if they noticed bystanders showing passive or aggressive responses. This strategy may also be beneficial for mobilising constructive victim-focused and constructive bully-focused bystander intervention responses (Bussey et al., 2020; Luo & Bussey, 2019). If students are encouraged to reflect on different courses of action bystanders can take and discuss the outcome/impact of these bystander roles, schools are nurturing an environment where students recognise the importance and choose to act on constructive responses to help the victim.

The findings also have implications for promoting bystander intervention to cyberbullying. The social psychological work by Latané and Darley (1970) outlines the importance of being able to notice the event and interpret the event as something serious that merits intervention when deciding whether to intervene. Normally, bystanders would look to others to see how they physically respond via diffusion of responsibility. However, in the online environment this notion is much more ambiguous as bystanders may be unaware how many virtual ‘on-lookers’ there are. As the severity of the situation has been implicated in reducing the bystander effect (Fischer et al., 2011; Macaulay et al., 2019), it is important for teachers to promote the idea that all forms of cyberbullying, regardless of the factors examined in the current study are serious, and so merits intervention. The current study found that young people aged 11–20 years from the Midlands, England do respond differently to cyberbullying situations according to the publicity, if the perpetrator is anonymous, the type of cyberbullying witnessed, and if the victim is upset or not. These factors were found to explain differences in likelihood to intervene in a positive or negative manner. As such, these findings have important implications for the development of bystander support and initiatives. An important element to promote positive bystander actions is the expectation of appraisal and social support. Therefore, the educational community, parents, and social media companies need to implement social support and recognition for bystander intervention, as this will increase perceived self-efficacy to intervene to support the victim and confront the perpetrator (DeSmet et al., 2014).

In addition, educating young people that some victims may suffer in silence, and can experience negative consequences from cyberbullying even if the perpetrator has/has not concealed their identity, may reinforce the message that all incidents of cyberbullying are serious. As such, young people will be more inclined to intervene to support the victim and seek help to address the situation. For example, teachers can implement reflection discussions and role play scenarios to help build empathy, so young people are more likely to see cyberbullying as serious when the victim is upset (Machackova & Pfetsch, 2016).

6. Limitations

The use of hypothetical vignettes to measure perceived severity of cyberbullying and how young people respond to situations needs to be acknowledged. For example, how young people respond to cyberbullying in real life may be different (Nickerson et al., 2014). Another limitation of the vignettes used is the wording and representation of the variables that are being measured. For example, the written versus visual depiction of the cyberbullying scenarios may lack validity because visual depictions were not provided in the study, rather written information about a visual depiction. Despite this, written information about a visual depiction has previously been included in cyberbullying scales with good validity and reliability (Nocentini et al., 2010; Palladino et al.,

2015), and such typologies have been used to examine differences in perceived severity of cyberbullying with a similar age group of 12 to 20-year-olds (Palladino et al., 2017). Regarding perceived severity, it is possible this may change if the scenarios were more specific in terms of the wording and the different types of cyberbullying behaviours young people experience. The fact that perceived severity is the implicit perception of potential harm to the individual or others suggests this construct may be largely context specific, and so the current findings should be taken considering this. However, the construct of perceived severity is highly relevant to understanding the behaviours of the peer group (Menesini & Salmivalli, 2017; van der Ploeg et al., 2017), and the extent to which a cyberbullying situation may prompt constructive bystander intervention strategies (Domínguez-Hernández et al., 2018; Macaulay et al., 2019). Future research should further explore the relation between the perception of severity and constructive victim-focused or constructive bully-focused intervention strategies in the context of cyberbullying.

In addition, it is possible some young people reported higher agreement with positive bystander intentions, even though this may not have reflected their true behaviour in real life. One study has shown how young people are prone to report higher levels of defending behaviour, but actual defending behaviour in real life is a lot lower (Lindstrom Johnson et al., 2013). However, like previous research (Schultze-Krumholz et al., 2020), the current study aimed to account for these social desirability effects by reinforcing the idea that there were no right or wrong responses, it was down to the perception of the individual, and all responses were completed anonymously. It is also important to note that while 24 vignettes were developed to experimentally manipulate the factors of publicity, anonymity, type of cyberbullying, and victim response in every combination, there was only one vignette per condition. This means that any differences found for perceived severity and/or bystander responses can only be associated with the specific contextual factors of each condition. Future research could develop the findings of the current study by utilising more than one vignette per condition. Regarding the context of the scenarios, it is worth noting that some participants may not constitute all scenarios as cyberbullying. For example, non-anonymously sending an insulting comment to a victim who did not feel upset may be more easily construed as banter or joking around. However, banter interactions online are very easily misinterpreted as cyberbullying due to the ambiguity of online interactions which is a common experience for young people (Betts & Spenser, 2017; Buglass et al., 2020; Steer et al., 2020). Future research should explore the role of bystander intervention strategies in the context of banter versus cyberbullying interactions.

7. Conclusion

The current study highlights that the victim response is the most influential factor across all response strategies, followed by the publicity of the incident, the anonymity of the bully, and the type of cyberbullying. In summary, young people aged 11–20 years from the Midlands, England are more likely to perceive cyberbullying to be serious when it occurs in the public domain, is perpetrated anonymously, and the victim is noticeably upset. The type of cyberbullying made no difference on the perceived severity of cyberbullying. In addition, the study found young people are more likely to act positively when they witness cyberbullying (i.e., seek help from a friend/adult, emotional support, and intervene to challenge the bully) when it occurs in the public domain, is perpetrated anonymously, and the victim is upset. Victim response was found to be the most influential factor on the perceived severity of cyberbullying, and across all bystander intervention strategies. Future research should further explore the influential role on how the victim responds to cyberbullying as a strategy to mobilise constructive bystander intervention.

Credit author statement

Peter J. R. Macaulay: Conceptualization, Methodology, Investigation, Formal analysis, Writing – original draft, Visualization, Project administration. **Lucy R. Betts:** Conceptualization, Methodology, Writing – review & editing, Supervision. **James Stiller:** Writing – review & editing, Supervision. **Blerina Kellezi:** Writing – review & editing, Supervision.

Author disclosure statement

There are no competing interests to declare. This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

References

- Baguley, T. (2012). *Serious stats: A guide to advanced statistics for the behavioral sciences*. Macmillan International Higher Education.
- Balakrishnan, V. (2018). Actions, emotional reactions and cyberbullying—From the lens of bullies, victims, bully-victims and bystanders among Malaysian young adults. *Telematics and Informatics*, 35(5), 1190–1200. <https://doi.org/10.1016/j.tele.2018.02.002>
- Bastiaensens, S., Van Cleemput, K., Vandebosch, H., Poels, K., DeSmet, A., & De Bourdeaudhuij, I. (2019). Were you cyberbullied? Let me help you.” studying adolescents’ online peer support of cyberbullying victims using thematic analysis of online support group fora. In *Narratives in research and interventions on cyberbullying among young people* (pp. 95–112). Cham: Springer.
- Bastiaensens, S., Vandebosch, H., Poels, K., Van Cleemput, K., Desmet, A., & De Bourdeaudhuij, I. (2014). Cyberbullying on social network sites. An experimental study into bystanders’ behavioural intentions to help the victim or reinforce the bully. *Computers in Human Behavior*, 31, 259–271. <https://doi.org/10.1016/j.chb.2013.10.036>
- Bauman, S. (2010). Cyberbullying in a rural intermediate school: An exploratory study. *The Journal of Early Adolescence*, 30(6), 803–833. <https://doi.org/10.1177/0272431609350927>
- Bauman, S. (2013). Cyberbullying: What does research tell us? *Theory into practice*, 52(4), 249–256. <https://doi.org/10.1080/00405841.2013.829727>
- Benjamin, D. J., & Berger, J. O. (2019). Three recommendations for improving the use of p-values. *The American Statistician*, 73(sup1), 186–191. <https://doi.org/10.1080/00031305.2018.1543135>
- Betts, L. R., & Spenser, K. A. (2017). People think it’s a harmless joke”: Young people’s understanding of the impact of technology, digital vulnerability and cyberbullying in the United Kingdom. *Journal of Children and Media*, 11(1), 20–35. <https://doi.org/10.1080/17482798.2016.1233893>
- Black, G., Ard, D., Smith, J., & Schibik, S. (2010). The impact of the Weibull distribution on the performance of the single-factor ANOVA model. *International Journal of Industrial Engineering Computations*, 1(2), 185–198. <https://doi.org/10.5267/j.ijiec.2010.02.007>
- Blake, P., & Louw, J. (2010). Exploring high school learners’ perceptions of bullying. *Journal of Child and Adolescent Mental Health*, 22(2), 111–118. <https://doi.org/10.2989/17280583.2010.536657>
- Blanca Mena, M. J., Alarcón Postigo, R., Arnau Gras, J., Bono Cabré, R., & Bendayan, R. (2017). Non-normal data: Is ANOVA still a valid option? *Psicothema*, 29(4), 552–557, 2017 <http://hdl.handle.net/2445/122126>.
- 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>
- Brochado, S., Soares, S., & Fraga, S. (2017). A scoping review on studies of cyberbullying prevalence among adolescents. *Trauma, Violence, & Abuse*, 18(5), 523–531. <https://doi.org/10.1177/1524838016641668>
- Brody, N., & Vangelisti, A. L. (2016). Bystander intervention in cyberbullying. *Communication Monographs*, 83(1), 94–119. <https://doi.org/10.1080/03637751.2015.1044256>
- Bryce, J., & Fraser, J. (2013). It’s common sense that it’s wrong”: Young people’s perceptions and experiences of cyberbullying. *Cyberpsychology, Behavior, and Social Networking*, 16(11), 783–787. <https://doi.org/10.1089/cyber.2012.0275>
- Buglass, S. L., Abell, L., Betts, L. R., Hill, R., & Saunders, J. (2020). Banter versus bullying: A university student perspective. *International Journal of Bullying Prevention*, 1–13. <https://doi.org/10.1007/s42380-020-00085-0>
- Bussey, K., Luo, A., Fitzpatrick, S., & Allison, K. (2020). Defending victims of cyberbullying: The role of self-efficacy and moral disengagement. *Journal of School Psychology*, 78, 1–12. <https://doi.org/10.1016/j.jsp.2019.11.006>
- Cardinal, R. N., & Aitken, M. R. F. (2006). *ANOVA for the behavioural sciences researcher*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Chen, L. M., & Cheng, Y. Y. (2017). Perceived severity of cyberbullying behaviour: Differences between genders, grades and participant roles. *Educational Psychology*, 37(5), 599–610. <https://doi.org/10.1080/01443410.2016.1202898>
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. New York: Routledge Academic.

- Corby, E. K., Campbell, M., Spears, B., Slee, P., Butler, D., & Kift, S. (2016). Students' perceptions of their own victimization: A youth voice perspective. *Journal of School Violence, 15*(3), 322–342. <https://doi.org/10.1080/15388220.2014.996719>
- Cowie, H. (2011). Peer support as an intervention to counteract school bullying: Listen to the children. *Children & Society, 25*(4), 287–292. <https://doi.org/10.1111/j.1099-0860.2011.00375.x>
- Cowie, H. (2013). Cyberbullying and its impact on young people's emotional health and well-being. *The psychiatrist, 37*(5), 167–170. <https://doi.org/10.1192/pb.bp.112.040840>
- Cross, D., Shaw, T., Hadwen, K., Cardoso, P., Slee, P., Roberts, C., Thomas, L., & Barnes, A. (2016). Longitudinal impact of the Cyber Friendly Schools program on adolescents' cyberbullying behavior. *Aggressive Behavior, 42*, 166–180. <https://doi.org/10.1002/ab.21609>
- Cunningham, C. E., Rimas, H., Mielko, S., Mapp, C., Cunningham, L., Buchanan, D., ... Marcus, M. (2016). What limits the effectiveness of antibullying programs? A thematic analysis of the perspective of teachers. *Journal of School Violence, 15*(4), 460–482. <https://doi.org/10.1080/15388220.2015.1095100>
- Dennehy, R., Meaney, S., Walsh, K. A., Sinnott, C., Cronin, M., & Arensman, E. (2020). Young people's conceptualizations of the nature of cyberbullying: A systematic review and synthesis of qualitative research. *Aggression and Violent Behavior, 51*, 101379. <https://doi.org/10.1016/j.avb.2020.101379>
- Department for Education. (2017). *Preventing and tackling bullying: Advice for headteachers, staff and governing bodies*. Retrieved 20th January 2022, from https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/623895/Preventing_and_tackling_bullying_advice.pdf.
- DeSmet, A., Bastiaensens, S., Van Cleemput, K., Poels, K., Vandebosch, H., & De Bourdeaudhuij, I. (2012). Mobilizing bystanders of cyberbullying: An exploratory study into behavioural determinants of defending the victim. *Annual review of cybertherapy and telemedicine, 10*, 58–63.
- DeSmet, A., Deforche, B., Hublet, A., Tanghe, A., Stremersch, E., & De Bourdeaudhuij, I. (2014). Traditional and cyberbullying victimization as correlates of psychosocial distress and barriers to a healthy lifestyle among severely obese adolescents—a matched case–control study on prevalence and results from a cross-sectional study. *BMC Public Health, 14*(1), 224. <https://doi.org/10.1186/1471-2458-14-224>
- Dillon, K. P., & Bushman, B. J. (2015). Unresponsive or un-noticed?: Cyberbystander intervention in an experimental cyberbullying context. *Computers in Human Behavior, 45*, 144–150. <https://doi.org/10.1016/j.chb.2014.12.009>
- Domínguez-Hernández, F., Bonell, L., & Martínez-González, A. (2018). A systematic literature review of factors that moderate bystanders' actions in cyberbullying. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace, 12*(4). <https://doi.org/10.5817/CP2018-4-1>
- Dooley, J. J., Pyżalski, J., & Cross, D. (2009). Cyberbullying versus face-to-face bullying: A theoretical and conceptual review. *Zeitschrift für Psychologie/Journal of Psychology, 217*(4), 182–188. <https://doi.org/10.1027/0044-3409.217.4.182>
- Dredge, R., Gleeson, J. F., & De la Piedad Garcia, X. (2014). Risk factors associated with impact severity of cyberbullying victimization: A qualitative study of adolescent online social networking. *Cyberpsychology, Behavior, and Social Networking, 17*(5), 287–291. <https://doi.org/10.1089/cyber.2013.0541>
- Education and Inspections Act 2006. (2006). United Kingdom: Department for Education. Retrieved from https://www.legislation.gov.uk/ukpga/2006/40/pdfs/ukpga_20060040_en.pdf.
- Fawzi, N. (2009). *Cyber-mobbing. Ursachen und Auswirkungen von Mobbing im internet [Cyberbullying: Causes and effects of bullying via the internet]*. Baden-Baden, Germany: Nomos Verlag.
- Ferreira, E. B., Rocha, M. C., & Mequelino, D. B. (2012). Monte Carlo evaluation of the ANOVA's F and Kruskal-Wallis tests under binomial distribution. *Sigma, 1*(1), 126–139.
- Fischer, P., Krueger, J. I., Greitemeyer, T., Vogrinic, C., Kastenmüller, A., Frey, D., ... Kainbacher, M. (2011). The bystander-effect: A meta-analytic review on bystander intervention in dangerous and non-dangerous emergencies. *Psychological Bulletin, 137*(4), 517.
- Fowler, R. L., & Barker, A. S. (1974). Effectiveness of highlighting for retention of text material. *Journal of Applied Psychology, 59*(3), 358. <https://psycnet.apa.org/doi/10.1037/h0036750>.
- Frane, A. V. (2015). Power and type I error control for univariate comparisons in multivariate two-group designs. *Multivariate Behavioral Research, 50*(2), 233–247. <https://doi.org/10.1080/00273171.2014.968836>
- Gini, G., Albiero, P., Benelli, B., & Altoe, G. (2008). Determinants of adolescents' active defending and passive bystanding behavior in bullying. *Journal of Adolescence, 31*(1), 93–105. <https://doi.org/10.1016/j.adolescence.2007.05.002>
- Heiman, T., Olenik-Shemesh, D., & Eden, S. (2015). Cyberbullying involvement among students with ADHD: Relation to loneliness, self-efficacy and social support. *European Journal of Special Needs Education, 30*(1), 15–29. <https://doi.org/10.1080/08856257.2014.943562>
- Hinduja, S., & Patchin, J. W. (2019). Connecting adolescent suicide to the severity of bullying and cyberbullying. *Journal of School Violence, 18*(3), 333–346. <https://doi.org/10.1080/15388220.2018.1492417>
- Huang, Y. Y., & Chou, C. (2013). Revisiting cyberbullying: Perspectives from Taiwanese teachers. *Computers & Education, 63*, 227–239. <https://doi.org/10.1016/j.compedu.2012.11.023>
- Huberty, C. J., & Morris, J. D. (1992). Multivariate analysis versus multiple univariate analyses. In A. E. Kazdin (Ed.), *Methodological issues & strategies in clinical research* (pp. 351–365). American Psychological Association. <https://doi.org/10.1037/10109-030>
- Koehler, C., & Weber, M. (2018). Do I really need to help?!" Perceived severity of cyberbullying, victim blaming, and bystanders' willingness to help the victim. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace, 12*(4). <https://doi.org/10.5817/CP2018-4-4>
- Kowalski, R., Giumetti, G. W., & Limber, S. P. (2017). Bullying and cyberbullying among rural youth. In *Handbook of rural school mental health* (pp. 231–245). Cham: Springer.
- Kowalski, R. M., & Limber, S. P. (2007). Electronic bullying among middle school students. *Journal of Adolescent Health, 41*(6), S22–S30. <https://doi.org/10.1016/j.jadohealth.2007.08.017>
- Kowalski, R. M., Limber, S. P., & McCord, A. (2019). A developmental approach to cyberbullying: Prevalence and protective factors. *Aggression and Violent Behavior, 45*, 20–32. <https://doi.org/10.1016/j.avb.2018.02.009>
- Lantz, B. (2013). The impact of sample non-normality on ANOVA and alternative methods. *British Journal of Mathematical and Statistical Psychology, 66*(2), 224–244. <https://doi.org/10.1111/j.2044-8317.2012.02047.x>
- Latané, B., & Darley, J. M. (1970). *The unresponsive bystander: Why doesn't he help?* Appleton-Century-Crofts.
- Lindstrom Johnson, S., Waasdorp, T. E., Debnam, K., & Bradshaw, C. P. (2013). The role of bystander perceptions and school climate in influencing victims' responses to bullying: To retaliate or seek support? *Journal of Criminology, 2013*.
- Livingstone, S., Davidson, J., Bryce, J., Batool, S., Haughton, C., & Nandi, A. (2017). *Children's online activities, risks and safety: A literature review by the UKCCIS evidence group*.
- Luo, A., & Bussey, K. (2019). The selectivity of moral disengagement in defenders of cyberbullying: Contextual moral disengagement. *Computers in Human Behavior, 93*, 318–325. <https://doi.org/10.1016/j.chb.2018.12.038>
- Macaulay, P. J., Betts, L. R., Stiller, J., & Kellezi, B. (2018). Perceptions and responses towards cyberbullying: A systematic review of teachers in the education system. *Aggression and Violent Behavior, 43*, 1–12. <https://doi.org/10.1016/j.avb.2018.08.004>
- Macaulay, P. J., Betts, L. R., Stiller, J., & Kellezi, B. (2021). 'The more public it is, the more severe it is': Teachers' perceptions on the roles of publicity and severity in cyberbullying. *Research Papers in Education, 36*(6), 726–753. <https://doi.org/10.1080/02671522.2020.1767183>
- Macaulay, P. J., Boulton, M. J., & Betts, L. R. (2019). Comparing early adolescents' positive bystander responses to cyberbullying and traditional bullying: The impact of severity and gender. *Journal of Technology in Behavioral Science, 4*(3), 253–261. <https://doi.org/10.1007/s41347-018-0082-2>
- Macaulay, P. J., Boulton, M. J., Betts, L. R., Boulton, L., Camerone, E., Down, J., ... Kirkham, R. (2020). Subjective versus objective knowledge of online safety/dangers as predictors of children's perceived online safety and attitudes towards e-safety education in the United Kingdom. *Journal of Children and Media, 14*(3), 376–395. <https://doi.org/10.1080/17482798.2019.1697716>
- Machackova, H. (2020). Bystander reactions to cyberbullying and cyberaggression: Individual, contextual, and social factors. *Current Opinion in Psychology, 37*, 100–106. <https://doi.org/10.1016/j.copsyc.2020.06.003>
- Machackova, H., Dedkova, L., & Mezulanikova, K. (2015). Brief report: The bystander effect in cyberbullying incidents. *Journal of Adolescence, 43*, 96–99. <https://doi.org/10.1016/j.adolescence.2015.05.010>
- Machackova, H., & Pfetsch, J. (2016). Bystanders' responses to offline bullying and cyberbullying: The role of empathy and normative beliefs about aggression. *Scandinavian Journal of Psychology, 57*(2), 169–176. <https://doi.org/10.1111/sjop.12277>
- Menesini, E., Nocentini, A., & Calussi, P. (2011). The measurement of cyberbullying: Dimensional structure and relative item severity and discrimination. *Cyberpsychology, Behavior, and Social Networking, 14*(5), 267–274. <https://doi.org/10.1089/cyber.2010.0002>
- Menesini, E., & Salmivalli, C. (2017). Bullying in schools: The state of knowledge and effective interventions. *Psychology Health & Medicine, 22*(sup1), 240–253. <https://doi.org/10.1080/13548506.2017.1279740>
- Mishna, F., Saini, M., & Solomon, S. (2009). Ongoing and online: Children and youth's perceptions of cyber bullying. *Children and Youth Services Review, 31*(12), 1222–1228. <https://doi.org/10.1016/j.childyouth.2009.05.004>
- Moxey, N., & Bussey, K. (2020). Styles of bystander intervention in cyberbullying incidents. *International journal of bullying prevention, 2*(1), 6–15. <https://doi.org/10.1007/s42380-019-00039-1>
- Myers, C. A., & Cowie, H. (2019). Cyberbullying across the lifespan of education: Issues and interventions from school to university. *International Journal of Environmental Research and Public Health, 16*(7), 1217. <https://doi.org/10.3390/ijerph16071217>
- Nickerson, A. B., Singleton, D., Schnurr, B., & Collen, M. H. (2014). Perceptions of school climate as a function of bullying involvement. *Journal of Applied School Psychology, 30*(2), 157–181. <https://doi.org/10.1080/15377903.2014.888530>
- Nocentini, A., Calmaestra, J., Schultze-Krumholz, A., Scheithauer, H., Ortega, R., & Menesini, E. (2010). Cyberbullying: Labels, behaviours and definition in three European countries. *Journal of Psychologists and Counsellors in Schools, 20*(2), 129–142. <https://doi.org/10.1375/ajcg.20.2.129>
- Ofcom. (2021). *Children and parents: Media use and attitudes report*. London: Office of Communications. Retrieved from https://www.ofcom.gov.uk/_data/assets/pdf_file/0025/217825/children-and-parents-media-use-and-attitudes-report-2020-21.pdf.
- Ofsted. (2019). *School inspection handbook*. Retrieved 20 March, 2020, from https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/843108/School_inspection_handbook_-_section_5.pdf.
- Olweus, D. (1999). Sweden. In P. K. Smith, Y. Morita, J. Junger-Tas, D. Olweus, R. Catalano, & P. Slee (Eds.), *The nature of school bullying: A cross-national perspective* (pp. 7–27). London & New York: Routledge.
- Olweus, D., & Limber, S. P. (2010). Bullying in school: Evaluation and dissemination of the Olweus bullying prevention program. *American Journal of Orthopsychiatry, 80*(1), 124. <https://psycnet.apa.org/doi/10.1111/j.1939-0025.2010.01015.x>

- Pabian, S. (2019). An investigation of the effectiveness and determinants of seeking support among adolescent victims of cyberbullying. *The Social Science Journal*, 56(4), 480–491. <https://doi.org/10.1016/j.sosocij.2018.09.011>
- Palladino, B. E., Menesini, E., Nocentini, A., Luik, P., Naruskov, K., Ucanok, Z., ... Scheithauer, H. (2017). Perceived severity of cyberbullying: Differences and similarities across four countries. *Frontiers in Psychology*, 8, 1524. <https://doi.org/10.3389/fpsyg.2017.01524>
- Palladino, B. E., Nocentini, A., & Menesini, E. (2015). Psychometric properties of the florence cyberbullying-cybervictimization scales. *Cyberpsychology, Behavior, and Social Networking*, 18(2), 112–119. <https://doi.org/10.1089/cyber.2014.0366>
- Patterson, L. J., Allan, A., & Cross, D. (2017). Adolescent bystander behavior in the school and online environments and the implications for interventions targeting cyberbullying. *Journal of School Violence*, 16(4), 361–375. <https://doi.org/10.1080/15388220.2016.1143835>
- Pepler, D., Mishna, F., Doucet, J., & Lameiro, M. (2021). Witnesses in cyberbullying: Roles and dilemmas. *Children and Schools*, 43(1), 45–53. <https://doi.org/10.1093/cs/cdaa027>
- Pieschl, S., Kuhlmann, C., & Porsch, T. (2015). Beware of publicity! Perceived distress of negative cyber incidents and implications for defining cyberbullying. *Journal of School Violence*, 14(1), 111–132. <https://doi.org/10.1080/15388220.2014.971363>
- Pieschl, S., Porsch, T., Kahl, T., & Klockenbusch, R. (2013). Relevant dimensions of cyberbullying—results from two experimental studies. *Journal of Applied Developmental Psychology*, 34(5), 241–252. <https://doi.org/10.1016/j.appdev.2013.04.002>
- van der Ploeg, R., Kretschmer, T., Salmivalli, C., & Veenstra, R. (2017). Defending victims: What does it take to intervene in bullying and how is it rewarded by peers? *Journal of School Psychology*, 65, 1–10. <https://doi.org/10.1016/j.jsp.2017.06.002>
- Redmond, P., Lock, J. V., & Smart, V. (2020). Developing a cyberbullying conceptual framework for educators. *Technology in Society*, 60, 101223. <https://doi.org/10.1016/j.techsoc.2019.101223>
- Sainio, M., Veenstra, R., Huitsing, G., & Salmivalli, C. (2011). Victims and their defenders: A dyadic approach. *International Journal of Behavioral Development*, 35(2), 144–151. <https://doi.org/10.1177/0165025410378068>
- Schultze-Krumbholz, A., Zagorscak, P., Hess, M., & Scheithauer, H. (2020). The influence of school climate and empathy on cyberbystanders' intention to assist or defend in cyberbullying. *International journal of bullying prevention*, 2(1), 16–28. <https://doi.org/10.1007/s42380-019-00040-8>
- Sevciková, A., Šmahel, D., & Otavová, M. (2012). The perception of cyberbullying in adolescent victims. *Emotional & Behavioural Difficulties*, 17(3–4), 319–328. <https://doi.org/10.1080/13632752.2012.704309>
- Slonje, R., & Smith, P. K. (2008). Cyberbullying: Another main type of bullying? *Scandinavian Journal of Psychology*, 49(2), 147–154. <https://doi.org/10.1111/j.1467-9450.2007.00611.x>
- 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>
- Smith, P. K., Mahdavi, J., Carvalho, M., & Tippett, N. (2006). *An investigation into cyberbullying, its forms, awareness and impact, and the relationship between age and gender in cyberbullying*. London: DfES. Research Brief No. RBX03-06.
- Smith, P. K., & Sharp, S. (Eds.). (1994). *School bullying: Insights and perspectives*. London: Routledge.
- Sobba, K. N., Paez, R. A., & Ten Bensel, T. (2017). Perceptions of cyberbullying: An assessment of perceived severity among college students. *TechTrends*, 61(6), 570–579. <https://doi.org/10.1007/s11528-017-0186-0>
- Song, J., & Oh, I. (2018). Factors influencing bystanders' behavioral reactions in cyberbullying situations. *Computers in Human Behavior*, 78, 273–282. <https://doi.org/10.1016/j.chb.2017.10.008>
- Steer, O. L., Betts, L. R., Baguley, T., & Binder, J. F. (2020). I feel like everyone does it"—adolescents' perceptions and awareness of the association between humour, banter, and cyberbullying. *Computers in Human Behavior*, 108, 106297. <https://doi.org/10.1016/j.chb.2020.106297>
- Sticca, F., & Perren, S. (2013). Is cyberbullying worse than traditional bullying? Examining the differential roles of medium, publicity, and anonymity for the perceived severity of bullying. *Journal of Youth and Adolescence*, 42(5), 739–750.
- Strobelt, H., Oelke, D., Kwon, B. C., Schreck, T., & Pfister, H. (2015). Guidelines for effective usage of text highlighting techniques. *IEEE Transactions on Visualization and Computer Graphics*, 22(1), 489–498. <https://doi.org/10.1109/TVCG.2015.2467759>
- Suler, J. (2004). The online disinhibition effect. *CyberPsychology and Behavior*, 7(3), 321–326. <https://doi.org/10.1089/1094931041291295>
- These, M. S., Ronna, B., & Ott, U. (2016). P value interpretations and considerations. *Journal of Thoracic Disease*, 8(9), E928. <https://doi.org/10.21037/jtd.2016.08.16>
- Tynes, B. M., Rose, C. A., & Williams, D. R. (2010). The development and validation of the online victimization scale for adolescents. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace*, 4(2). <https://cyberpsychology.eu/article/view/4237>
- Van Cleemput, K., Vandebosch, H., & Pabian, S. (2014). Personal characteristics and contextual factors that determine “helping,” “joining in,” and “doing nothing” when witnessing cyberbullying. *Aggressive Behavior*, 40(5), 383–396. <https://doi.org/10.1002/ab.21534>
- Vandebosch, H., Poels, K., & Deboutte, G. (2014). Schools and cyberbullying: Problem perception, current actions and future needs. *International Journal of Cyber Society and Education*, 7(1), 29–48. <https://www.learnlib.org/p/209181/>
- Vandebosch, H., & Van Cleemput, K. (2008). Defining cyberbullying: A qualitative research into the perceptions of youngsters. *CyberPsychology and Behavior*, 11(4), 499–503. <https://doi.org/10.1089/cpb.2007.0042>
- Varghese, M. E., & Pistole, M. C. (2017). College student cyberbullying: Self-esteem, depression, loneliness, and attachment. *Journal of College Counseling*, 20(1), 7–21. <https://doi.org/10.1002/jocc.12055>
- Winer, B. J., Brown, D. R., & Michels, K. M. (1971). *Statistical principles in experimental design* (Vol. 2). New York: McGraw-Hill.
- Wolke, D., Lee, K., & Guy, A. (2017). Cyberbullying: A storm in a teacup? *European Child & Adolescent Psychiatry*, 26(8), 899–908. <https://doi.org/10.1007/s00787-017-0954-6>
- Wong-Lo, M., & Bullock, L. M. (2014). Digital metamorphosis: Examination of the bystander culture in cyberbullying. *Aggression and Violent Behavior*, 19(4), 418–422.
- You, L., & Lee, Y. H. (2019). The bystander effect in cyberbullying on social network sites: Anonymity, group size, and intervention intentions. *Telematics and Informatics*, 45, 101284.