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Adolescents' moral evaluations and ratings of cyberbullying: The effect of veracity and intentionality behind the event

Victoria Talwar [a,*], Carlos Gomez-Garibello [a], Shaheen Shariff [b]

[a] Dept. of Educational and Counselling Psychology, McGill University, 3700 McTavish Street, Room 614, Montreal, QC H3A1Y2, Canada
[b] Dept. of Integrated Studies in Education, McGill University, 3700 McTavish Street, Room 244, Montreal, QC H3A1Y2, Canada

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ABSTRACT

The constant exposure to electronic media has increased the likelihood of adolescents experiencing hurtful events such as cyberbullying. The current study examined how adolescents' moral evaluations of cyberbullying are affected by different aspects of the event including falsity of posts, power imbalance and intention to harm. Adolescents between 12–13 years of age ($n = 77$) and 15–16 years of age ($n = 77$) read moral vignettes and were asked to evaluate the actions of the protagonist. They were also asked if the behaviour in the vignette was an incident of cyberbullying. Participants also filled out a questionnaire about their own experiences with cyberbullying. It was found that adolescents evaluated as more negative those situations depicting false stories, imbalance of power, and intention to harm; Younger children had difficulties recognizing the intentions behind on-line posts. Adolescents who have cyber-intimidated others were less severe in their evaluations and less likely to rate vignettes as cyberbullying compared to other youth.

1. Introduction

Communication technologies are the prevalent mode of communication among today's youth. The on-line world is a new setting where youth engage with peers and adults. Engaging on-line can provide students with opportunities to develop academically, socially and their own identity. Pew Internet Research Center (Pew, 2009) reports that 93% of American teens use the internet. For example, social network sites (SNS) such as Facebook have more than 750 million active users (Facebook 2011), and more than 60% of 13–17 year olds have personal SNS profiles. The majority of research examining youth's on-line use has focused on adolescents between 14 and 16 year olds (e.g., Aricak et al., 2008; Li, 2007). However, young people's use of on-line technology is growing and expanding to increasingly include younger children under 14 years of age (Print Measurement Bureau, 2013). As a result, educators and other professionals working with adolescents have grown increasingly concerned about how technology affects social relationships given the amount of time that is spent engaging in online activities and the risks involved.

Although most youth communicate responsibly, cyberbullying has become a significant concern of parents, educators, and policy makers. Cyberbullying has been defined as any intentional and aggressive message, repeated over time against someone who is not able to defend him or herself using electronic communication devices (Menesini & Nocentini, 2009; Smith, Smith, Osborn, & Samara, 2008). However, Shariff and Sheikh (in progress) explain that cyberbullying can also be unintentional as digital natives, namely, children growing up immersed in digital media (Prensky, 2001) often fail to appreciate the difference between jokes and intentional harm. Cyberbullying is an extension of traditional bullying using digital media (Li, 2007). Both result in exclusion, isolation, lost reputations, loss of self-esteem, physical and emotional harm, and in tragic cases, death from video-taped beatings or suicide (Hinduja & Patchin, 2010; McQuade, Colt, & Meyer, 2009). However, unlike traditional bullying which decreases during adolescence, cyberbullying appears to increase over the secondary school years (Smith & Slonje, 2010).

2. Review of literature

2.1. Cyberbullying and moral understanding

Research on cyberbullying has increased in recent years. Researchers have focused their interest especially on the prevalence of cyberbullying between adolescents (Hinduja & Patchin, 2010) and the co-occurrence of these behaviours and bullying in

* Corresponding author. Tel.: +1 514 398 3438.
E-mail address: victoria.talwar@mcgill.ca (V. Talwar).

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face-to-face interactions (Li, 2007; Ybarra & Mitchell, 2004; Ybarra, Mitchell, Finkelhor, & Wolak, 2007). On-line bullying includes such behaviours as using the internet or technology to send or post text and images that hurt or embarrass another person including teasing in a mean way and threatening another person (Moessner, 2007; Patchin & Hinduja, 2006; Wolak, Mitchell, & Finkelhor, 2007).

However, there is a dearth of systematic evidence examining moral aspects of cyberbullying events or their ratings of such events as actual incidents of cyberbullying, especially among younger adolescents. It has been argued that it is important to investigate individual differences in bullying behaviour and that young people's moral understanding is an important aspect to consider when explaining the occurrence of bullying behaviours (Arsenio & Lemerise, 2004; Hymel, Schonert-Reichl, Bonanno, Vaillancourt, & Rocke Henderson, 2010 for review). For instance, research on traditional bullying has found that children who engage in bullying are more likely to use mechanisms of moral disengagement when evaluating bully events than victims or non-aggressive children (Bacchini, Amodeo, Ciardi, Valerio, & Vitelli, 1998; Gini, 2006; Hymel, Rocke-Henderson, & Bonanno, 2005; Menesini et al., 2003; Perren, Gutzwiller-Helfenfinger, Malti, & Hymel, 2012). Laible, Eye, and Carlo (2008) identified the level of internalization of moral values as being negatively associated with bullying behaviour. Furthermore, youth who are frequently aggressive may not view aggressive behaviour as a moral transgression (Harvey, Fletcher, & French, 2001; Tisak & Jankowski, 1998).

To date, only a few studies have explored moral aspects of cyberbullying (Bauman, 2010; Menesini, Nocentini, & Calussi, 2011; Perren & Gutzwiller-Helfenfinger, 2012; Pornari & Wood, 2010; Steffgen, König, Pfetsch, & Melzer, 2011). Similar to traditional bullying, it has been found that those who engage in cyberbullying are more likely to use moral disengagement mechanisms when evaluating on-line behaviours than non-bullies (Perren & Gutzwiller-Helfenfinger, 2012). Also, it has been found that adolescent cyberbullies display lower levels of empathy than non-cyberbullies (Steffgen et al., 2011). This suggests that both perpetrators of bullying and cyberbullying share some characteristics when evaluating aggressive or potentially aggressive events.

H1. We expected that adolescents that have engaged in cyberbullying would give more positive ratings and less likely to view on-line interactions as cyberbullying.

2.2. Influence of age on moral understanding

In terms of moral understanding, developmental trends indicate that with age children increasingly understand morally relevant situations like transgressions, teasing and peer harassment as negative behaviours, judge them as wrong, and are able to anticipate the emotions of the persons involved (Krettenauer, Malti, & Sokol, 2008; Malti, Gasser, & Gutzwiller-Helfenfinger, 2010). Thus, research on moral development has found that such behaviours are judged as falling within the moral domain and are considered unfair and hurtful (Horn, 2005). However, moral judgments are also affected by the context of the peer relationship (Killen, Lee-Kim, McGlothlin, & Stangor, 2002).

Research on bullying also suggests that with age youth become more tolerant of bullying and less empathetic towards the victim (Menesini et al, 1997). Research with focus groups of elementary school children between the ages of 9–12 years and high school youth (ages 13–17) confirms these findings (Shariff & Sheikh, 2012). Not only were the elementary school children more sympathetic; they also expressed the desire for a more friendly, supportive and socially responsible online environment. Thus, examining moral evaluations of young people's attitudes to cyberbullying is important, as acts of aggression are often viewed as moral transgressions. Such an examination will lead to an improved understanding of how adolescents' moral evaluations connect with their on-line intentional victimization behaviour (Arsenio & Lemerise, 2004). However, little is known about the role of developmental trends in youth's evaluations of different events or their evaluations of different types of events as being cyberbullying rather than harmless teasing or unintentional acts.

H2. We expected that there would be developmental differences between early adolescents (12–13 years of age) who would be less likely to attend to the intention to harm when evaluating behaviours compared to the older adolescents (15–16 years of age).

2.3. The influence of event characteristics

Several elements have been explored as the most salient when it comes to evaluating the severity of face-to-face traditional bullying events. It has been found that adolescents and adults evaluate as more negative those events of physical rather than relational bullying (Bauman & Del Rio, 2006; Monks & Smith, 2006). Additionally, aggressions repeated over time were rated as more negative than those that happened once (Hazler, Miller, Carney, & Green, 2001). In the case of cyberbullying, evidence suggests that adolescents consider as more severe those events involving graphic information (videos or pictures) displaying violent acts or private scenes (Menesini et al., 2011). However, there is no consideration of what other characteristics of bullying apart from repetition over time play a role in cyberbullying. These can include power imbalance and intention (or lack of intention) to harm, which might have significant negative impact during online communications. Also recent qualitative research suggests many youth fail to discriminate real aggressions from harmless fun acts (Shariff & Sheikh, unpublished report). These findings are especially important as cyberbullying is a form relational aggression that is not face-to-face and thus may be harder for youth, especially younger youth, to evaluate.

In face-to-face interactions, one can sometimes determine the intention of another by using contextual behavioural cues (e.g., sticking out one's tongue, laughter, singsong chants, smirking) to infer teasing or deception (e.g., fidgeting, shifting eye gaze). Research suggests that children's and adolescents' abilities to use such behavioural cues and inconsistencies between verbal and non-verbal expressive behaviour increases with age (e.g., Rotenberg, Simourd, & Moore, 1989). Thus, the ability to judge the intentions and falsity of statements may be further exacerbated by the nature of on-line communications which do not have the same contextual information that face-to-face interactions have.

It remains unclear how youth view such behaviours as teasing and lying on-line. Research on children's lie-telling shows that from an early age they appreciate the differences between lying for antisocial purposes (i.e., for personal gain, for self-oriented reasons) and prosocial purposes (i.e., to help another) (e.g, Bussey, 1992; Bussey, 1999; Walper & Valtin, 1992). Their teasing can also be with the intention of being harmful or playful (Barnett, Burns, Sanborn, Bartel, & Wilds, 2004; Warm, 1997). While playful teasing can help youth develop social skills and foster positive interpersonal encounters (Eisenberg, 1986), hostile harmful teasing increases as children and adolescents become more aware of the social context and social norms leading to a focus on norm violations within peer groups (Keltner, Capps, Kring, Young, & Heerey, 2001). With age, children are increasingly able to judge the intentions of others when assessing the acceptability of their statements and actions (Heyman, Sweet, & Lee, 2009; Keltner et al., 2001).

However, in the on-line world, young people's ability to detect the intentions of others and the resulting harm to another may be hampered. In the on-line world, there is often distance from the potential harm one may cause by actions or comments. This distance may impact a person's ability to discern an underlying moral value and feel guilt at a transgression. Furthermore, the normative frameworks of digital natives and adults are changing as the boundaries of what is acceptable speech online that may not be acceptable face-to-face, continue to shift. In that regard, the new reality of the digital media age may change what is considered socially acceptable (Willard, 2007).

As a result it is unclear how truth-telling is perceived in the context of harm to another. In other words, when someone posts something embarrassing (but true) about an individual on-line for others to see and with the intention to harm that person. Equally unclear is how youth will rate a situation where a friend posts something in order to tease the other individual and where the intention is playful rather than a desire to create harm. Such situations may frequently happen in the cyber-world. What needs to be studied is how acceptable these behaviours are considered by youth (both emerging adolescents and older adolescents) whether they view them as cyberbullying.

H3. We expected that adolescents would evaluate situations that involved intention to harm, an imbalance of power between characters and posting false information (i.e., lies) as more negative.

2.4. The current study

The purpose of the current study was to examine youth's moral evaluations of cyberbullying. Participants were asked to evaluate eight vignettes that occurred on social network sites. In designing the vignettes, two defining characteristics of traditional bullying – intention to harm and power imbalance (Olweus, 1993) were taken into account as well as situations dealing with telling the truth or lying (e.g., false rumours, falsely altered photos). Each vignette included two main characters: a potential victim and a potential perpetrator of a cyber aggression. Participants were asked to evaluate each vignette and decide whether the action of the perpetrator was good or bad using a 5 point Likert scale. Participants were then asked whether they would assess the behaviour as a case of cyberbullying or not. Finally, participants answered questions regarding the frequency and types of internet use they engage in and their personal experience with cyberbullying and if they had ever cyberbullied.

3. Method

3.1. Participants

A total of 154 adolescents participated in this study, with 77 children between 12 and 13 years of age in the young adolescent group and 77 children between 15 and 16 years in the older adolescent group. Table 1 shows the mean age and number of boys and girls in each age group. Participants were recruited at schools in North America ($n = 68$) and in Latin America ($n = 86$). Parental consent and adolescent assent were obtained.

Table 1
Demographic information (sex and age in years) of participants.

	Young adolescents $n = 77$	Older adolescents $n = 77$
Mean age (standard deviation)	13.9	15.3
	(.58)	(.49)
Females	41	39
Males	36	38

3.2. Data collection materials

To examine adolescents' moral evaluations and ratings of cyberbullying, eight vignettes were developed. The vignettes depicted hypothetical situations that happen online.

For example:

Joanne is the cheerleader captain. She is very popular at school. Laura is very shy and does not have many friends. Laura really loves to observe animals, especially birds and some people call her "birdgirl". Joanne thinks this is funny. Every day for two months, Joanne posts messages on Facebook about Laura, and calls them the "Chronicles of Birdgirl".

John and Peter are on the school basketball team. Although they are not the best players, both of them play every game and are respected by the rest of their team. John sends emails to the whole team about Peter saying that no one on the team wants Peter to play, because when he plays, they always lose. Peter and the basketball team receive at least three posts a day from John with that message.

The vignettes were created taking into consideration two characteristics of bullying (power imbalance and intention to harm), and whether or not a lie was involved in the episode. The vignettes included two characters: a potential victim and a potential instigator. Thus, the vignettes varied along three dimensions: veracity of perpetrator's statements (i.e., the statement was false vs. truth), power balance between perpetrator and target (they were equal in social standing and grade level vs. unequal), and harm (harm to target vs. no harm to target). Participants were asked to rate each situation in a five points Likert scale from 1 to 5 (1 = very bad, 5 = very good). They were then asked if they thought each situation was a case of cyberbullying or not. Two versions of the vignettes were designed: one for girls and one for boys, adolescents rated the stories accordingly to their gender.

3.3. Data collection procedure

Participants were first presented with the vignettes. After reading and giving moral evaluations and ratings of cyberbullying for each vignette, adolescents answered a questionnaire with demographic questions (i.e., age, sex, country), questions about internet use and questions on their experience with cyberbullying events. Results from the questionnaire found that all participants indicated they had internet at home. When participants were asked how often they used the internet, 66.23% said at least once a day, 30.52% said 3–5 times per week, and 3.25% said 1–3 times per week. When asked if they accessed the internet primarily alone or in a group, 72.1% said alone, 6.5% said in a group, 19.5% said both and 1.9% did not answer. The majority of participants indicated they primarily accessed the internet at home (72.08%), while only 4.54% said primarily at school and 18.18% indicating both home and school (5.19% did not answer). Almost all participants (93.5%) indicated that they had experienced or witnessed some on-line aggression (e.g., harassment, mean teasing to embarrass, or threats) at least once. There were no significant differences regarding use of internet based upon the demographic variables of age, sex or country.

4. Results

For each vignette, participants rated the acceptability of each on-line behaviour and indicated whether they believed each was

a case of bullying or not. Analyses first considered the acceptability ratings and then the bullying identification. Preliminary results found no differences based upon culture so data was collapsed for all further analyses. All statistical tests were evaluated using an alpha level of .05. Overall, 31.2% ($n = 48$) of adolescents admitted to participating in cyber-bullying. There was no significant difference between number of males ($n = 21$) and females ($n = 27$) that admitted cyberbullying ($\chi^2(1, N = 154) = .517$, $p = .47$).

To examine adolescents' moral evaluations and ratings of cyberbullying, a 2 (veracity: false vs. truth) × 2 (power balance, equal vs. unequal) × 2 (harm: harm vs. no harm) repeated measures design was used with age group (younger vs. older participants), sex (male vs. female) and whether they had participated in cyberbullying (cyberbullyied vs. no cyberbullying) were between subject factors.

4.1. Moral evaluations on-line behaviours

Participants' moral evaluations for each of the 8 vignettes on a five point scale, with higher scores indicating greater acceptability of the behaviours. The dependent variable of moral evaluations was analyzed using a repeated measures ANOVA. Within subject variables were veracity of perpetrator's statements (false vs. truth), power balance between perpetrator and target (equal vs. unequal), harm (harm to target vs. no harm to target), and the between subjects factors were age group of the participants, sex of participants and whether they had participated in cyberbullying.

There were main effects emerged for veracity of perpetrator's statements, $F(1, 146) = 144.44$, $p < .001$, partial $\eta^2 = .50$, power balance between perpetrator and target, $F(1, 146) = 70.52$, $p < .001$, partial $\eta^2 = .33$, harm, $F(1, 146) = 536.60$, $p < .001$, partial $\eta^2 = .79$, and whether participants admitted to cyberbullying others, $F(1, 146) = 8.49$, $p = .004$, partial $\eta^2 = .06$. Participants rated true on-line posts ($M = 2.10$, $SE = .04$) as significantly more acceptable than false posts ($M = 1.56$, $SE = .04$). On-line interactions where there was an equal power balance between the perpetrator and target ($M = 2.0$, $SE = .04$) were rated as more acceptable than when there was an imbalance of power ($M = 1.67$, $SE = .04$). On-line interactions where there was no harm to the target ($M = 2.31$, $SE = .04$) were rated as more acceptable than when there was harm to the target ($M = 1.35$, $SE = .03$). Finally, those who admitted cyberbullying gave less negative ratings ($M = 1.92$, $SE = .05$) than those who did not admit cyberbullying ($M = 1.74$, $SE = .03$). However, these main effects were qualified by a number of two- and three-way interactions which were explored with simple effects using Bonferonni comparisons.

There was a significant interaction between veracity and power, $F(1, 146) = 45.67$, $p < .001$, partial $\eta^2 = .24$. True posts when there was equal balance of power were rated the most acceptable ($M = 2.41$, $SE = .06$, $ps < 0.05$). True posts where there was an imbalance of power were also rated significantly more acceptable ($M = 1.80$, $SE = .04$, $ps < .05$) than false posts which did not differ based upon balance of power (balance: $M = 1.58$, $SE = .04$; imbalance: $M = 1.54$, $SE = .05$). There was also an interaction between power and harm to target, $F(1, 146) = 71.65$, $p < .001$, partial $\eta^2 = .33$. When there was harm to target, participants did not distinguish equal balance ($M = 1.34$, $SE = .04$) and imbalance of power ($M = 1.36$, $SE = .04$) and rated them both very negatively. However, they rated interactions where there no harm to target with a balance of power ($M = 2.65$, $SE = .06$) as significantly more acceptable ($ps < .01$) as well when there was an imbalance of power but no harm to target ($M = 1.97$, $SE = .05$, $ps < .05$).

There was a significant interaction veracity and harm to target, $F(1, 146) = 170.96$, $p < .001$, partial $\eta^2 = .54$. However, this was further qualified by two 3-way interactions. There was an interaction between veracity, harm to target, and age of participant, $F(1, 146) = 6.40$, $p = .012$, partial $\eta^2 = .042$. As seen in Table 2 while younger adolescents rated false posts more negatively than true posts regardless of harm ($ps < .05$), older adolescents rated true posts more positively than false posts only when there was no harm ($p < .001$). When there was harm involved there was no significant differences in older adolescents' ratings of truth and lies, rating them both negatively. There was also an interaction between veracity, harm and cyberbullying, $F(1, 146) = 5.22$, $p = .024$, partial $\eta^2 = .04$. As seen in Table 2, when there was no harm, all participants rated false posts more negatively than true posts ($ps > .01$). However, when there was harm adolescents who cyber-bullied rated false posts less negatively than those who did not engage in cyberbullying ($p < .01$) and gave them less negative ratings than true posts ($p < .01$). Also adolescents who admitted cyberbullying rated true stories that did not harm less negatively ($p < .05$) than those who reported not engaging in cyberbullying.

There was also a two-way interaction between sex of participant and whether the child had cyberbullied, $F(1, 146) = 5.42$, $p = .02$, partial $\eta^2 = .04$. However, this was further qualified by a 3-way interaction between sex of participant, cyberbullying and harm to target, $F(1, 146) = 7.91$, $p = .006$, partial $\eta^2 = .05$. As seen in Table 3, while overall, regardless of participation in cyberbullying, males and females rated vignettes with harm to target more negatively than those without harm ($ps < .01$). Females who cyberbullied rated vignettes without harm more positively than those who had not reported engaging in cyberbullying ($p < 001$). Furthermore, for vignettes without harm, males had more positive ratings than females among participants who did not report in engaging in cyberbullying ($p < 05$). Amongst participants who did report cyberbullying, females had more positive ratings than males for vignettes without harm ($p < .05$).

Finally, there was an interaction between veracity, age of participant and also cyberbullying, $F(1, 146) = 3.87$, $p = .051$, partial $\eta^2 = .03$. As seen in Table 4, while younger adolescents rated all lies more negatively than truths regardless of whether they admitted to cyberbullying or not ($ps < .001$), older adolescents who admitted to cyberbullying rated lies less negatively than those who reported not engaging in cyberbullying ($p < .01$).

4.2. Cyberbullying identification

A repeated measures Analysis of Variance (ANOVA) was conducted on the participant ratings of whether they believed the interactions were cyberbullying or not (dependent variable). Within subject variables were veracity of perpetrator's statements (false vs. true), power balance between perpetrator and target (equal vs. unequal), harm (harm to target vs. no harm to target), and the between subjects factors were age group of the participants, sex of participants and whether they had participated in cyberbullying.

Main effects emerged for veracity of perpetrator's statements, $F(1, 146) = 154.79$, $p < .001$, partial $\eta^2 = .51$, power balance

Table 2
Means and standard deviations of moral ratings by age group, experience with cyberbullying across characteristics of event (intention to harm and veracity).

	Harm		No harm	
	True	False	True	False
Younger	1.42	1.26	2.98	1.67
	(.05)	(.05)	(.10)	(.07)
Older	1.37	1.36	2.80	1.79
	(.07)	(.06)	(.09)	(.06)
Cyberbullied	1.52	1.29	3.04	1.80
	(.08)	(.06)	(.11)	(.07)
Did not cyberbully	1.26	1.44	2.74	1.65
	(.05)	(.04)	(.07)	(.07)

Table 3
Means and standard deviations of moral ratings by sex and experience with cyberbullying across intentionality depicted in the event.

	Male		Female	
	Cyberbullied	Did not Cyberbully	Cyberbullied	Did not Cyberbully
Harm	1.42	1.33	1.40	1.26
	(.08)	(.05)	(.07)	(.05)
No harm	2.26	2.29	2.59	2.11
	(.11)	(.06)	(.08)	(.06)

Table 4
Means and standard deviations of moral ratings by age and experience with cyberbullying for veracity of the events.

	Younger		Older	
	Cyberbullied	Did not cyberbully	Cyberbullied	Did not cyberbully
False	1.60	1.98	1.73	1.43
	(.10)	(.05)	(.08)	(.06)
True	2.23	2.01	2.11	2.06
	(.10)	(.05)	(.08)	(.06)

Table 5
Means and standard deviations of moral ratings of characteristics of the event depicted (intentionality, veracity and power balance).

	Harm		No harm	
	False	True	False	True
Balance	.92	.94	.67	.15
	(.02)	(.02)	(.04)	(.03)
Imbalance	.91	.98	.81	.16
	(.03)	(.02)	(.03)	(.04)

between perpetrator and target, $F(1, 146) = 7.99$, $p = .005$, partial $\eta^2 = .05$, and harm, $F(1, 146) = 544.33$, $p < .001$, partial $\eta^2 = .79$. There was also a main sex of participant effect, $F(1, 146) = 4.74$, $p = .031$, partial $\eta^2 = .03$, and for participation in cyberbullying, $F(1, 146) = 3.92$, $p = .049$, partial $\eta^2 = .03$. Participants believed interactions that involved false posts ($M = .83$, $SE = .02$) were bullying than those that involved true posts ($M = .56$, $SD = .02$). On-line interactions where there was an unequal power balance between the perpetrator and target ($M = .72$, $SE = .02$) were rated bullying more than when there was an equal balance of power ($M = .67$, $SE = .02$). Finally, almost all rated on-line interactions where there was harm to the target ($M = .94$, $SE = .01$) as bullying whereas they were less likely to rate it as bullying when there was no harm to the target ($M = .45$, $SE = .02$). Females were more likely to rate vignettes as cyberbullying ($M = .72$, $SE = .02$) than males ($M = .66$, $SE = .02$). Those who had not engaged in cyberbullying were more likely to rate vignettes as cyberbullying ($M = .72$, $SE = .01$) than those who had not ($M = .66$, $SE = .02$). However, these main effects were qualified by a number of two- and three-way interactions.

These effects were qualified by the following interactions, which were explored with simple effects analyses using Bonferonni comparisons. There was a significant interaction between cyberbullying and harm to target, $F(1, 146) = 10.02$, $p = .002$, partial $\eta^2 = .06$. When there was harm to the target, there were no differences between those who had cyberbullied ($M = .94$, $SE = .02$) and those who had not ($M = .93$, $SE = .01$) with all rating vignettes as cyberbullying compared to vignettes without harm ($ps > .01$). When there was no harm those who had not cyberbullied were more likely to be rate vignettes as bullying ($M = .51$, $SE = .02$) than those who had cyberbullied ($M = .39$, $SE = .04$, $p < .05$).

There was a significant interaction between veracity and harm to target, $F(1, 146) = 222.67$, $p < .001$, partial $\eta^2 = .60$. However, this was further qualified by a 3 way interaction between veracity × power × harm, $F(1, 146) = 5.82$, $p = .017$, partial $\eta^2 = .04$. As see in Table 5, while participants rated all interactions that harmed the target negatively, when there was no harm to the target they rated false posts as bullying compared to true posts ($p < .001$) and they rated false posts where there was an imbalance of power as bullying more than those false statements where there was a balance of power ($p < .01$). When there was an imbalance of power, false posts were rated more as cyberbullying than true statements ($ps < .05$).

There was also a veracity by participant sex by cyberbullying interaction, $F(1, 146) = 6.62$, $p = .011$, partial $\eta^2 = .04$. As seen in Table 6, all participants rated false posts more as bullying than true posts ($ps < .01$). However, females who had cyberbullied were less likely to rate true posts as cyberbullying compared to those who had not cyberbullied ($p < .05$). Among those who had not cyberbullied, males gave lower ratings of cyberbulling than females ($p < .001$). There was also power balance by participant sex by cyberbullying interaction, $F(1, 146) = 4.56$, $p = .034$, partial $\eta^2 = .03$. As seen in Table 6, among those who had not cyberbullied, males gave fewer ratings of bullying for vignettes where there was a balance of power than females ($p < .001$). Also among those who had not cyberbullied, males gave fewer ratings of cyberbullying for vignettes where there was a balance of power than for vignettes where there was an imbalance ($p < .001$). When there was a balance of power there was a difference in females between those who had cyberbullied who gave fewer ratings of bullying and those who had not cyberbullied ($p < .05$). For females who had cyberbullied, they gave fewer ratings of bullying when there was a balance of power than when there was an imbalance ($p < .05$).

Table 6
Mean and standard deviation of moral evaluation of events across gender, experience with cyberbullying, veracity of the event and power balance.

	Male		Female	
	Cyberbullied	Did not cyberbully	Cyberbullied	Did not cyberbully
False	.73	.85	.84	.88
	(.05)	(.03)	(.04)	(.03)
True	.56	.51	.53	.63
	(.04)	(.03)	(.03)	(.02)
Balance	.65	.63	.64	.75
	(.04)	(.03)	(.03)	(.02)
Imbalance	.65	.73	.72	.77
	(.04)	(.03)	(.03)	(.02)

5. Discussion and conclusions

The current study examined the effect of characteristics of events, age, sex and experience with cyberbullying on moral evaluation of online interactions. Results revealed several significant findings. Adolescents tend to evaluate as more negative those situations depicting false stories, imbalance of power, and intention to harm; It was also found that those participants who have cyber-intimidated others are less severe in their evaluations than those who have not.

As expected based upon previous research on moral evaluations of lying (Bussey, 1992), situations where the perpetrator posted false information or rumours were considered more serious by adolescents than those situations in which the characters told the truth. Furthermore, true posts were rated more positively when there was a balance of power than when there was an imbalance. The majority of adolescents rated false posts as instances of cyberbullying. However, participants rated as cyberbullying instances where posts were true only approximately half the time.

Thus, it appears that adolescents see false posts as negative and potentially cyberbullying. However, they are less certain if the information posted happens to be true about the target. In such cases, other elements of the situation may inform their evaluations.

Overall, participants rated vignettes where there was a balance of power less negatively than when there was an imbalance of power. They were also more likely to see vignettes where there was an imbalance of power as instances of cyberbullying. Notably, when there was psychological harm to the targeted individual this appeared to supersede all other considerations in terms of participants' evaluations. Regardless of other characteristics, when there was harm to target almost all adolescents rated such vignettes as most serious. This finding is consistent in part with the definition of bullying relating to the presence of a power imbalance (Olweus, 1993) and empirical evidence in the field of teachers' and students' perception about bullying (Hazler et al., 2001; Bauman & Hurley, 2005). There was also almost universal agreement among adolescents that such events were cyberbullying.

Significantly, when there was no harm to the target, however, ratings were affected by other factors. Harmless teasing posts where there was a balance of power between perpetrator and target were rated more positively than when there was an imbalance. Harmless false posts where there was an imbalance of power were rated as cyberbullying more than when there was a balance of power. True harmless teasing posts were rated more positively than false posts, although this was affected by age. Adolescents tended to rate false harmless posts as instances of cyber-bullying. However, very few rated true harmless posts as cyberbullying.

Thus, it seems that adolescents recognized cases where the perpetrator posted true harmless material as teasing rather than aggressive acts. However, when the information was false (though harmless), they paid attention to the balance of power between the perpetrator and target as key in deciding whether it was cyber-aggression or not.

As suggested by previous research on traditional bullying (Harvey et al., 2001; Tisak & Jankowski, 1998) we found some support for differences in evaluations for adolescents who had been aggressive on-line. Overall, they appeared to evaluate the different vignettes less negatively and less likely to see such events as cyberbullying. However, this seemed particularly true for females. While females who did not engage in cyberbullying evaluated more cases as instances cyberbullying, females who had engaged in cyberbullying were the opposite. Furthermore, females who engaged in cyberbullying were more likely to give positive ratings than males who cyberbullied. They were also less likely to rate true posts as cases of cyberbullying. Among those who did not bully, males were more likely to rate vignettes with balance between the two characters as cyberbullying compared to females. Thus in accordance with the literature on bullying behaviour, there appear to be gender differences in perceptions of cyberbullying (e.g., Perren et al., 2012; Tangney, Stuewig, & Mashek, 2007).

As hypothesized there were differences between younger adolescents' and older adolescents' evaluations of bullying. While 15–16 year-olds were more likely to rate stories where there was harm to the target negatively regardless of other factors such as veracity or balance, 12–13 year-olds paid less attention to harm when making their evaluations. For instance, younger adolescents rated false posts more negatively than true posts regardless of whether there was harm or not. There were also no differences found in the younger group amongst those who cyberbullied and those who had not. Only in the older group of adolescents, were there differences. Older adolescents who cyberbullied had less negative ratings than those who had not cyberbullied.

The results of our recent study suggest that there are developmental differences in adolescents' perceptions of on-line behaviours and their understanding of cyberbullying events. Young adolescents may have a hard time understanding the intentions behind on-line interactions and are less likely to consider the intention to harm in their evaluations. Older adolescents have had more experience on-line which may make them more sensitive to different types of on-line behaviours. This may lead younger adolescents to be less aware of potential hostile intentions underlying messages and interactions online. Thus, young adolescents would be at higher risk of receiving real threats and harassment and mislabelling them as simple jokes. These results support the necessity of designing intervention programs aimed to help younger adolescents to discriminate between harmless messages and real online threats.

Overall, little is known about how youth perceive on-line activities and their view of their moral and ethical responsibility engaging on-line. The current study suggests more research is needed to fully understand how adolescents perceive and evaluate on-line activities and cyberbullying. Future research should examine adolescents' moral justifications for their evaluations of different types of on-line behaviour. Furthermore, the current study did not include an exhaustive list of on-line activities or include all potential aspects of on-line behaviour that may affect adolescents' perceptions. It also did not include the range of technologies (e.g., cell phones) that may be used to cyberbully. Future research is needed to examine how a wider range of behaviours across different technologies influences adolescents' perceptions.

Investigating moral aspects of cyberbullying is important so that we can understand why adolescents engage in these kinds of actions. This also has important implications for designing interventions that address this behaviour. Such knowledge on how adolescents perceive on-line behaviour can be incorporated into values and character education to address specifically on-line aggression. By knowing how adolescents judge events online, educators can design more effective developmentally appropriated educational tools that address students' perceptions and educate them on the risks of using digital media and the consequences of on-line actions as well as promote student awareness and prevention of cyberbullying.

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