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Abstract

Prior studies indicate that teachers differ in how they respond to different kinds of traditional bullying, and that their beliefs predict their intervention intentions. The current study provided the first extension of this work into the realm of cyber bullying. Preservice teachers in the United Kingdom ($N = 222$) were presented with vignettes describing three subtypes of traditional bullying as well as cyber bullying, and the latter was directly compared with the former. Dependent variables were perceived seriousness, ability to cope, empathy, and intentions to intervene. Results showed that responses to cyber bullying were most similar to verbal traditional bullying, but distinct from physical and relational traditional bullying. For cyber bullying, willingness to intervene was significantly predicted from the other three dependent variables (collectively and each one uniquely). No gender differences were observed. The implications of the results concerning how teacher educators could help teachers to deal with cyber bullying were discussed.

Keywords

bullying, cyber bullying, peer victimization, teachers

Introduction and General Rationale

Bullying is a subset of aggression that is characterized by a power imbalance in favor of perpetrators over victims, intention to cause harm or distress, and repetition of the behavior (Olweus, 1993). While it may manifest in many different ways, bullying has recently been dichotomized into “traditional” versus “cyber” forms (Li, 2007; Patchin & Hinduja, 2006). The key distinguishing feature is that the latter are delivered via electronic media, notably mobile phones, personal computers, and the Internet. The former include physical, verbal, social exclusion, and relational (i.e., attempts to damage victims’ social relationships) forms. These two broad classes of bullying have a number of important differences, notably (a) the possibility of remaining anonymous being much higher in cyber bullying (Wolak, Mitchell & Finkelhor, 2007), (b) the relative lack of supervision and regulation by adults/authority figures of cyber bullying compared with traditional bullying (Basu & Jones, 2007), (c) the accessibility of victims being greater for cyber bullying than for traditional bullying (the “24/7” view; Slonje & Smith, 2008), (d) the greater degree of “editability” or being able to reflect on the actions/words used to maximize distress being greater for cyber than for traditional bullying (Valkenburg & Peter, 2011), and (e) the potentially much larger audience for

cyber bullying than for traditional bullying (Slonje & Smith, 2008). These and other differences are discussed by Dooley, Pyzalski, and Cross (2009).

With the growing use of electronic communication technologies, interest in cyber bullying is accelerating and catching up with the substantial knowledge base concerning traditional bullying. A significant proportion of school pupils are known to engage in the latter (Nansel et al., 2001) and it may even be the most common form of violence among this population (Batsche, 2002). It is well established from cross-sectional (Hawker & Boulton, 2000) and longitudinal (Reijntjes, Kamphuis, Prinzie, & Telch, 2010) studies that traditional bullying is associated with various forms of maladjustment, including disrupted concentration at school (Boulton, Trueman, & Murray, 2008). It is no surprise therefore that there is substantial research interest in how it might be tackled (Ttofi & Farrington, 2010). Some of this interest has focused on teachers’ beliefs and actions

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concerning traditional forms of bullying, but far less is known about cyber bullying in this regard, probably because the latter has only relatively recently become a focus of attention. This has revealed that cyber bullying is also associated with poorer psychological adjustment (Kowalski, Limber, & Agaston, 2008; Ybarra, 2004). In the present study, we follow previous studies that have directly compared the two broad classes of bullying because such comparisons provide a context that helps us understand the growing phenomenon of cyber bullying and how pre- and serving teachers may be helped to deal with it effectively (Boulton, Lloyd, Down, & Marx, 2012; Smith et al., 2008; Valkenburg & Peter, 2011).

The theories and empirical work we review below indicate that it is important that we understand more about pre- and serving teachers' beliefs about, and empathic reactions to, bullying, because if these beliefs and reactions are such that they could undermine effective anti-bullying action, efforts could be taken by teacher educators to change them. In this article, we focus on preservice teachers because those beliefs and reactions are not yet based on actual experiences dealing with bullying in schools, although just like serving teachers, preservice teachers' beliefs will very likely be shaped by their own direct and vicarious experiences of bullying as pupils. Another reason is because less is known about preservice teachers' beliefs and reactions relative to those of serving teachers. Given the latter, the following review draws on research from pre- and serving teachers.

Theoretical Rationale

The theoretical rationale for our study is provided by that group of social-psychological theories that posit that people's actions are driven to a large extent by the beliefs that they hold, notably, the theory of planned behavior (Ajzen, 1991) and self-efficacy theory (Bandura, 1977). These theories argue that volition is shaped by perceived behavioral control or the degree to which a person regards a specific behavior as difficult or easy, and as worthy of performing. That perceived behavioral control is such an important factor is shown by the finding in a meta-analysis that it accounted for up to 20% of the variance in prospective behavior across a range of domains (Armitage & Conner, 2001). These theories have recently been taken up by researchers concerned with understanding how teachers' beliefs impact their anti-bullying activities, and they have clear implications for teacher education. In this regard, and partly due to the influence of the theory of planned behavior (Ajzen, 1991) and self-efficacy theory (Bandura, 1977), three variables have been identified by researchers (Bauman & Del Rio, 2006; Craig, Henderson, & Murphy, 2000; Yoon & Kerber, 2003) as influencing teachers' perceived behavioral control, and behavioral intentions regarding bullying. These variables are self-efficacy (or ability to cope with a bullying situation), perceived seriousness (or how unacceptable a bullying situation is thought to be), and empathy (or feelings for the

victim of a bullying situation). We now consider each in turn, spelling out how we conceptualized them, and consider why each one can be expected to predict teachers' intentions to intervene or not in actual bullying incidents.

Teachers' Self-Efficacy or Perceived Ability to Cope With Bullying

Self-efficacy, or perceived ability to cope, is generally regarded as the beliefs that people have about their ability to successfully enact a behavior (Hogg & Vaughan, 2011), and here it centers on teachers' beliefs regarding their ability to intervene effectively in bullying incidents. Prompted by Bandura's (1977) seminal work on self-efficacy theory, studies have confirmed that many aspects of teachers' professional practice are influenced by their self-efficacy beliefs (Emmer & Hickman, 1991; Gibson & Dembo, 1984; Wertheim & Leyser, 2002). Researchers have also started to examine the role of such beliefs in the context of anti-bullying. The first study of this variable found that most teachers felt unable to cope effectively with bullying in a general sense (Boulton, 1997), and since then inconsistent findings have been obtained; some evidence suggests teachers generally have a high level of self-efficacy for anti-bullying action (Bradshaw, Sawyer, & O'Brennan, 2007), but other evidence suggests the opposite (Beran, 2005). Novicka and Isaacs (2010) reported that how prepared teachers felt to deal with bullying, a key aspect of self-efficacy, influenced what they said they would do if they were to encounter bullying. Bradshaw et al. (2007) found that teachers were most likely to state that they would intervene in bullying incidents if they held high self-efficacy beliefs. Most of this work is limited by cross-sectional designs and teacher reports of anticipated rather than actual anti-bullying behavior. However, a more recent study indicated that teachers' self-efficacy for anti-bullying action longitudinally predicted actual anti-bullying behavior (Boulton, 2013b), and this has clear implications for teacher educators. Based on self-efficacy theory and this body of empirical work, and put simply, the more teachers believe they are effective at dealing with bullying, the more likely they will be to be proactive in intervening in actual incidents.

Teachers' Perceptions of the Seriousness of Bullying

The theory of planned behavior (Ajzen, 1991) also suggests that teachers' beliefs about how serious bullying is influences their tendency to intervene, because the more worthy a behavior is considered to be, the more likely it is to be enacted. Studies have confirmed this notion because the more serious teachers believed bullying to be, the more they said they would intervene (Bauman & Del Rio, 2006; Boulton, 1997; Craig et al., 2000; Ellis & Shute, 2007; Yoon & Kerber, 2003).

Teachers' Empathy for Victims of Bullying

Empathy toward victims of bullying is similarly an important variable to consider. While it is true that the way empathy has been conceptualized has varied, what most scholars accept is that it involves one person "sharing" the feelings of another person, and being able to take their perspective (Lamm, Batson, & Decety, 2007). Research has shown that empathy is a predictor of prosocial helping behavior, especially if the empathic concern involves feelings such as compassion, tenderness, and sympathy (Batson et al., 1991; Preston & de Waal, 2002). We adopted this "other-oriented" (Decety & Lamm, 2006) conceptualization of empathy in the current study, that is, we regarded empathy as sympathetic, supportive feelings toward a victim of bullying. Although this work was not carried out with teachers, it provides a compelling rationale to investigate empathic responses among them to different types of bullying, and linkages between those responses and intentions to intervene or not in actual incidents.

Subtypes of Traditional Bullying and Variations in Teachers' Beliefs

It is now widely known that traditional bullying can take many different forms, and three of the most common and widely researched manifestations are physical (exemplified by hitting and kicking), verbal (exemplified by hostile teasing), and relational (exemplified by attempts to damage the victim's social relationships and exclude them). While most teachers acknowledge that they have an anti-bullying role (Boulton, 1997), studies have revealed substantial variations in their (and preservice teachers') beliefs and actions concerning subtypes of traditional forms (Kochenderfer-Ladd & Pelletier, 2008; Nicolaides, Toda, & Smith, 2002). Salient in this literature is a group of studies that have provided serving and preservice teachers with vignettes concerning subtypes of traditional bullying to investigate a number of key variables including perceived seriousness, empathy for victims, ability to cope, and willingness to intervene (Bauman & Del Rio, 2006; Craig et al., 2000; Yoon & Kerber, 2003). These and other studies (Boulton, 1997; Ellis & Shute, 2007) have shown that physical bullying is perceived as the most serious, social exclusion and relational bullying to be least serious, and verbal bullying to be somewhere in between. The findings for teachers' empathy toward victims of different kinds of traditional bullying, and their willingness to intervene, echo this pattern. All of this is cause for concern given the findings that non-physical forms of bullying are often associated with pronounced negative outcomes (Crick, 1996; Hawker & Boulton, 2001). That we should be concerned is given added support by findings that show that perceptions of severity and empathy for victims impact adults' willingness to intervene (Bauman & Del Rio, 2006; Ellis & Shute, 2007; Yoon & Kerber, 2003) and, as noted above, by the

theory of planned behavior (Ajzen, 1991), which proposes that such beliefs predict actual behavior. Collectively, this work suggests that teachers' effectiveness as "anti-bullying" agents are contingent on the beliefs that they hold toward different forms of bullying. Again, this work has clear salience to teacher educators.

Teachers' Beliefs and Actions Regarding Cyber Bullying

Currently, very little is known about how cyber bullying fits in relative to subtypes of traditional bullying in this field of research, because most extant studies have examined cyber bullying in isolation or not at all. While preservice teachers have reported that they regard cyber bullying as serious (Yilmaz, 2010), many do not think it is a problem in schools (Li, 2008) and most report little confidence in dealing with it (Li, 2008; Yilmaz, 2010). To date, no study has compared the perceived seriousness, empathy toward victims, ability to cope, and willingness to intervene in traditional *versus* cyber bullying among either serving or preservice teachers. Given that (a) cyber bullying, like its traditional counterpart, has been implicated as contributing to maladjustment (Ybarra, Mitchell, Wolak, & Finkelhor, 2006), and (b) the research highlighted above that suggests that beliefs predict willingness to intervene, there is value to be had in directly comparing the two subtypes.

Several studies have reported gender differences in pre- and serving teachers' beliefs about, and actions taken toward, bullying (Bauman, Rigby, & Hoppa, 2008; Ellis & Shute, 2007; Yilmaz, 2010). For instance, Yilmaz (2010) reported that male preservice teachers felt more confident in identifying and managing cyber bullying than their female peers. Boulton (1997) found that female teachers reported more negative attitudes toward bullying than males. Consequently, the present study tested for gender differences (see below).

The Current Study

Clearly, teachers have an important role to play in responding to and preventing all forms of bullying in schools, and this should be reflected in the initial and ongoing training they are offered. It is somewhat disconcerting therefore that several studies have found they are not always reported by pupils to be effective in this role (Fekkes, Pijpers, & Verloove-Vanhorick, 2005; Smith & Shu, 2000; Rigby & Barnes, 2002). More needs to be done to understand their beliefs and intentions, and this point would also be relevant to preservice teachers as they have little or no direct experience of bullying among pupils and so their beliefs and intentions may be especially important when they take up their posts in schools. Hence, it is especially important to find out more about preservice teachers' beliefs and intentions concerning cyber bullying due to lack of data, lack of direct comparisons with traditional bullying, and the evidence that an increasing number of pupils are involved in cyber

Table 1. Descriptive Statistics for Vignette Ratings by Bullying Type, and Reliability Correlations (*r*).

Item rated	Bullying type											
	Physical			Verbal			Relational			Cyber		
	<i>M</i>	<i>SD</i>	<i>r</i>	<i>M</i>	<i>SD</i>	<i>r</i>	<i>M</i>	<i>SD</i>	<i>r</i>	<i>M</i>	<i>SD</i>	<i>r</i>
Severity	4.56	0.47	.31***	4.08	0.47	.17*	3.27	0.69	.43***	4.02	0.68	.47***
Empathy	4.46	0.49	.44***	4.30	0.45	.37***	3.80	0.56	.39***	4.06	0.58	.53***
Coping	3.92	0.81	.45***	3.72	0.74	.17*	3.59	0.76	.44***	3.43	0.86	.55***
Intervention	4.70	0.46	.76***	4.26	0.53	.53***	3.37	0.81	.61***	3.88	0.80	.73***

r = Pearson's correlation coefficient.

p* < .05. *p* < .001.

bullying (Rivers & Noret, 2010). Moreover, Yoon and Kerber's (2003) pointed that because some forms of bullying are covert, they are likely to be particularly difficult for teachers to detect and deal with, would apply strongly to cyber bullying. On this basis, these authors predicted that pre- and serving teachers' beliefs and actions would vary for different forms of bullying. Thus, rather than generalize findings from traditional bullying to cyber bullying, it is necessary to compare them directly within the same sample. Hence, the current study had two over-arching aims, neither of which has been addressed to date. One was to conduct the first direct comparison of preservice teachers' beliefs and actions toward forms of traditional versus cyber bullying. The other was to test the hypothesis, derived from the theory of planned behavior (Ajzen, 1991) and the work of Bandura (1977) on associations between behavior and self-efficacy, that preservice teachers' intentions to intervene in incidents of cyber bullying could be predicted from three beliefs variables (perceived seriousness, empathy for victims, and perceived ability to cope) collectively and uniquely (i.e., controlling for their shared variance). Tests of unique effects are important for determining the relative importance of predictors. For both aims, gender differences were also tested, that is, did gender moderate any of the main effects?

Method

Participants

Data were collected from 222 preservice teachers (68.5% female) aged between 18 and 54 years (*M* = 27.1, *SD* = 9.1). One subgroup teachers (*n* = 176, 83.7%) were training to become secondary school teachers (teaching 12- to 18-year-olds) and they were undergoing a 1-year postgraduate teaching course, after previously completing an undergraduate non-teaching degree. They were aged between 21 and 74 (*M* = 28.7, *SD* = 9.4). Three quarters of them were aged 30 or lesser, and only 6 were aged above 50. The other subgroup (*n* = 46, 20.7%) were undergoing a 4-year undergraduate degree course training to become primary school teachers (teaching 5- to 11-year-olds). Nine of these were in their first

year of training, and the rest were in their second year. They were aged between 18 and 38 years (*M* = 21.2, *SD* = 3.9). The age composition of the sample is typical of trainee teachers in the United Kingdom, based on our many years' experience delivering these courses. All participants were enrolled at one university in the United Kingdom, but came from several different classes.

Measures and Procedure

The measures we used were based on those initially developed by Craig et al. (2000) and modified by Yoon and Kerber (2003) and Bauman and Del Rio (2006). In those studies, participants were presented with two vignettes each of physical, verbal, and relational bullying situations followed by Likert-type scale items to tap beliefs and intentions. Our major modification was the addition of two vignettes depicting cyber bullying incidents (see the appendix). Here, each vignette was followed by four Likert-type scales measuring the dependent variables: (a) seriousness of the behavior ("In your opinion, how serious is this situation?"), (b) empathy for victims ("I would be upset by the student's behavior and would feel empathic toward the bullied child," (c) confidence in coping ("I would feel confident coping with this situation," and (d) willingness to intervene ("How likely are you to intervene in this situation?"), each measured on a 5-point Likert-type scale ranging from 1—(a) not at all serious, (b) strongly disagree, (c) not at all confident, (d) not at all likely—to 5—(a) very serious, (b) strongly agree, (c) very confident, and (d) very likely. To assess internal reliability, a Pearson correlation was calculated for each of the pairs of items for each subtype of bullying. These are shown in Table 1. While two of the correlations were relatively low (.17) they were still significant (*p* < .05), and the rest were all highly significant (*p* < .001) and in the range of .31 to .76. Hence, as in the previous studies, an average of the scores for the pairs of items for each subtype of bullying were computed and used in subsequent analyses.

Following the granting of ethical approval by the local Ethics Committee, and approval from the course administrator, participants were provided with information about the

Table 2. Predictors of Interventions Into Cyber Bullying.

	Interventions into cyber bullying		
	B	SE	β
Constant	-.81	.25	
Empathy ratings for cyber bullying	.32	.08	.24***
Coping ratings for cyber bullying	.31	.04	.34***
Severity ratings for cyber bullying	.57	.07	.49***
			$F(3, 185) = 129.66^{***}, R^2 = .672$

*** $p < .001$.

study and invited to take part. They were provided with the anonymous questionnaire and a researcher remained on hand to answer questions. The questionnaire contained a definition of the four subtypes of bullying (see the appendix).

Results

Means and standard deviations for the four dependent variables are given in Table 1. Initially, we carried out 4 (bullying type) \times 2 (gender) ANOVA tests, one for each dependent variable, to determine if there were differences as a function of bullying type and gender (the first aim of the study). None of the main or interaction effects involving gender were significant, and so we re-analyzed and report one-way repeated-measures ANOVA in which bullying type was the independent variable. Where Mauchley's test of sphericity was significant, degrees of freedom were adjusted accordingly using the Huynh–Feldt procedure. Partial η^2 was used as the index of effect size. Post hoc comparisons, with Bonferroni corrections, were used to locate specific significant differences following a significant main effect.

Severity scores were significantly different for the four types of bullying, $F(2.711, 536.704) = 305.87, p < .001$, partial $\eta^2 = .61$. Physical bullying received significantly higher severity ratings than each of the other three types of bullying, and relational bullying received significantly lower severity ratings than each of the other three types of bullying (all comparisons were significant at $p < .001$). There was no significant difference between ratings of verbal and cyber bullying.

Empathy scores were significantly different for the four types of bullying, $F(2.683, 509.837) = 126.52, p < .001$, partial $\eta^2 = .40$. All types of bullying received significantly different empathy ratings from each other (all comparisons were significant at $p < .001$), with the descending order being physical, verbal, cyber, and relational bullying.

Coping scores were significantly different for the four types of bullying, $F(2.740, 512.411) = 33.20, p < .001$, partial $\eta^2 = .15$. Physical bullying received significantly higher coping ratings than each of the other three types of bullying, and cyber bullying received significantly lower coping ratings than each of the other three types of bullying (all

comparisons were significant at $p < .001$, except cyber bullying and relational bullying at $p < .05$). There was no significant difference between ratings of verbal and relational bullying.

Intervention scores were significantly different for the four types of bullying, $F(2.566, 495.289) = 227.51, p < .001$, partial $\eta^2 = .54$. Physical bullying received significantly higher intervention scores than each of the other three types of bullying, relational bullying received significantly lower intervention scores than each of the other three types of bullying (all comparisons were significant at $p < .001$). There was no significant difference between scores for verbal and cyber bullying.

To assess the second aim of this study, a standard regression model was tested in which intervention in cyber bullying was predicted from severity, empathy, and coping rating of cyber bullying (see Table 2). As recommended elsewhere (Aiken & West, 1991), predictors were mean centered. Overall, the model was significant, $F(3, 185) = 129.66, p < .001$, and accounted for 67.2% of the variance in intervention scores; collectively, these three variables significantly predicted intervention in cyber bullying. In addition, severity, empathy, and coping all emerged as significant *unique* predictors (i.e., after their shared variance was statistically controlled; minimum $\beta = .24$, all $p < .001$). To determine if gender moderated any of these effects, we used the product of coefficients procedure (Aiken & West, 1991). Specifically, we re-ran the regression model hierarchically with gender also entered with severity, empathy, and coping at Step 1, and the Gender \times Severity, Gender \times Empathy, and Gender \times Coping product terms entered at Step 2. Neither the Step 2 effect as a whole nor any of the individual product terms at that step were significant, indicating that gender did not act as a moderator.

Discussion

The present study has advanced understanding of cyber bullying in a number of important ways, especially its relevance to teacher educators and preservice teachers. It is clear from our findings that Initial Teacher Education (ITE) programs need to address how to educate trainee teachers in cyber and

traditional forms of bullying. Ofsted, the regulatory body for teaching and for ITE in the United Kingdom suggests that high-quality training and support that prepares trainees with the skills they need should include, “evidence of how the ITE partnership meets the statutory initial teacher training criteria and requirements, and all relevant legislation, including that related to: promoting equality and diversity; eliminating discrimination; and safeguarding” (ITE, 2012, p. 12).

It is also clear that harassment and bullying has evolved with technology. Cyber bullying which uses the Internet, social networking, or mobile phones to spread rumor is very difficult to regulate. Educating aspiring teachers into the enormities of their own and other’s digital footprints is also difficult to plan for. However, Ofsted has proposed that educators need to ensure that ITE programs should, “use a range of approaches to teaching and learning, including information and communication technology (ICT) and educational technology where relevant . . . and develop strategies to manage behaviour successfully and tackle bullying, including cyber and prejudice-based bullying” (ITE, 2012, p. 31).

If, as Friere (1998) suggested, “Teacher preparation should go beyond the technical preparation of teachers and be rooted in the ethical formation both of selves and of history,” then there is an implication that changes in disposition in the teacher (educator) and learner (trainee teacher) need to occur (p. 23). These changes require knowledge to be viewed as a social entity rather than personal, and part of what Lave and Wenger (1991) saw as a “community of practice.” ITE programs need to educate trainee teachers to understand the premise that bullying often begins in seemingly private exchanges between friends, then leads to postings on public forums until the initial control is lost. They also need to understand that everyone is a potential target.

We also deem that as education is in a constant change mode, trainee teachers themselves need to be fully aware of how challenging these changes are. They also need to be given opportunities to construct their own teaching styles for each of the very different contexts they might operate in, and to build in the notion that behaviors, their own and others’ who they teach and work with, are there to be refined and developed. This suggests a constant need for reflection on ITE program content, analysis, professional/personal application and a need to refine current ways of working and/or define a new and insightful mode for future working.

As a consequence of conducting this research, the following was instigated at our University. During the two induction weeks of university-based learning, all ITE programs now include Professional Workshop Days that encourage trainee teachers to reflect on how they might effectively address all types of bullying, as well as wider online safety and child protection issues. The aim is to enable trainees to feel fully prepared for school induction and to ensure they are able to identify bullying-related issues and act appropriately. These issues are revisited throughout the year, providing opportunities for individuals to share ideas and problems and drive their own learning and understanding forward.

One of the aims of the current study was to carry out the first *direct comparison* of preservice teachers’ responses to cyber versus traditional bullying scenarios. Findings for the three traditional forms of bullying we examined replicated those obtained elsewhere (Bauman & Del Rio, 2006; Boulton, 1997; Craig et al., 2000; Ellis & Shute, 2007; Yoon & Kerber, 2003), in that (a) physical bullying was rated as being most serious, elicited the least empathy, and would be intervened in most readily, (b) responses to relational bullying were at the opposite extremes, and (c) responses to verbal bullying were somewhere in between. Our data showed that cyber bullying was responded to in similar ways to verbal bullying. Why that was the case is unclear and more research is needed. We suggest it could be that these two forms of bullying are perceived to be similar in how covert they are, perhaps less covert than physical bullying but more overt than relational bullying (see Yoon & Kerber, 2003, and below), although some forms of cyber bullying may be hidden from adults (Wolak, Mitchell, & Finkelhor, 2007). Another possibility is that our participants regarded cyber bullying as being “merely” an electronic manifestation of face-to-face verbal bullying. However, the latter view seems less plausible given that we also found that cyber bullying was most distinct from all three subtypes of traditional bullying, including verbal bullying, in that preservice teachers reported being significantly less confident in coping with it (see the following).

A second novel contribution of the current study was our finding that participants’ willingness to intervene in cyber bullying episodes could be predicted from their ratings for seriousness, empathy, and coping in relation to this form of bullying. These findings echo those from similar studies with traditional forms of bullying (Bauman & Del Rio, 2006; Ellis & Shute, 2007; Yoon & Kerber, 2003), and attest to the similarity between those traditional forms and cyber bullying in this particular regard. Our analysis also showed that all three of these variables emerged as a significant unique predictor (i.e., after their shared variance was controlled) and so they all have a part to play. To the best of our knowledge, no prior study has tested for such unique predictive effects. Given that teachers have such an important role in responding to bullying (Boulton, 1997), willingness to intervene may be a key driver of their behavior. That it is important for teachers to intervene is indicated by Huesmann and Eron’s (1984) point, more recently echoed by Yoon and Kerber (2003), that when pupils get away with bullying without being sanctioned in any way, they are likely to persist in this form of aggressive behavior, and also because we know cyber bullying can have negative effects (Ybarra et al., 2006). Hence, our findings suggest more needs to be done to enable pre- and serving teachers to regard cyber bullying in the same way that they regard physical bullying, that is, equally seriously and worthy of empathic responses and intervention.

Level of anti-bullying training has been implicated as being salient in this regard. Bauman et al. (2008) found that teachers who had received some anti-bullying training were

significantly less likely to ignore bullying. Boulton (2013b) reported that duration of training in a specific anti-bullying program predicted actual use of that program over an 8-month period. These results are consistent with findings that preservice teachers are calling for more support for dealing with cyber bullying in particular (Yilmaz, 2010). Relatedly, Yoon and Kerber's (2003) pointed that because social exclusion is "covert" it is especially difficult for teachers to identify and deal with seems to be relevant to cyber bullying also. We concur with these authors that more training to help pre- and serving teachers respond appropriately to cyber bullying (and other forms such as relational bullying) are urgently needed. This view is given further support by our finding that our participants reported being significantly less confident in coping with cyber bullying relative to all of the three forms of traditional bullying. However, the covert and often anonymous nature of cyber bullying and the fact that much of it takes place beyond the physical and temporal boundaries of the school will present challenges to this kind of initiative. Despite these challenges, it is important that teacher educators do more to enable trainee teachers to intervene effectively and appropriately in all kinds of bullying episodes, including cyber bullying, as several studies have shown that victims value genuineness, empathy, and being listened to on the part of those who provide social support (Boulton, Trueman & Rotenberg, 2007; Cowie, Naylor, Talamelli, Chauhan & Smith, 2002; Cowie & Olafsson, 2000). We argue that these things are much more likely when teachers are enabled to recognize the potentially harmful effects of cyber as well as traditional bullying, and feel confident that they understand them and can cope when they happen. Our data show that many preservice teachers are far from this ideal position, and this should act as an impetus for teacher educators to continue to focus on these issues.

In terms of supporting pre- and serving teacher education regarding bullying and how teachers can be enabled to play an effective role in its management and prevention, we concur with the general proposals of Yoon and Kerber (2003) that encourage teachers to be more open than perhaps they might be at present to discuss actual bullying incidents, to use these as a basis for setting up plans that equip potential victims with the skills that reduce their risks, such as assertiveness, and to establish school and class rules and climates that reflect intolerance to all types of bullying. More specifically, we advocate teacher education activities that are grounded in scientific findings about bullying, not least because prior work has shown that teachers report being much more open to trying new anti-bullying initiatives when this is the case (Boulton, 2013b). To us, it appears that any suggestions we provide to teachers about how to deal with bullying incidents are regarded as much more credible when we tell them they are based on scientific findings. Research has shown that pupils' understanding that *all kinds* of bullying, including cyber forms, are equally unacceptable can be facilitated through some very simple activities that involve discussing how victims might feel as a way of promoting

empathy, and in turn, intentions to help in some way (Boulton, Turner, Lomas, & Boulton, 2013). This type of simple activity could easily be incorporated into preservice training programs as well as inservice workshops for practicing teachers (Bauman et al., 2008; Dake, Price, Telljohann, & Funk, 2003). It is noteworthy, given the pressure on teacher educators to address a seemingly ever-increasing range of topics, that positive outcomes regarding teachers' reported ability to deal effectively with bullying have been demonstrated for even half-day training workshops using these kinds of activities, and that extra benefits arise if they are slightly longer (Boulton, 2013b).

As we note below, preservice and practicing teachers' responses to cyber and other forms of bullying will likely be shaped to some extent by their own experiences and personal worldviews. In our own training workshops, we have encountered teachers who are reluctant to "give up" their own position and so are less open to considering different views that could ultimately shape how they deal with (or refuse to deal with) actual bullying incidents. For instance, some individuals have said that as cyber bullying occurs mainly outside of school, it is not their responsibility to deal with it. It is possible that this could be a genuinely held belief, but we think teacher educators should challenge it for several reasons. One reason is that much cyber bullying does take place in school. Another is that no matter where it takes place, cyber bullying can have effects that carry over into school. A third reason is that such a belief could mask a low self-perceived ability to cope with cyber bullying among these teachers. Given that research has shown that improvements in teachers' self-efficacy mediated between anti-bullying training and subsequent anti-bullying actions (Boulton, 2013b), this suggests that teacher educators should have improvements in self-efficacy in dealing with cyber bullying as an *explicit aim* of any training they provide. Put another way, after taking part in training, teacher educators should ensure that teachers leave with specific knowledge and activities concerning how to deal with cyber bullying, and *believe that they personally can use them effectively*.

There are now numerous and increasing resources that teacher educators may draw on to improve the way the teachers they train address cyber bullying. Many of these are online and so available throughout the world (e.g., in the United Kingdom, <http://www.nhs.uk/Livewell/Bullying/Pages/Cyberbullying.aspx#Don't>). What points seem to unite these different sources of advice, and so are particularly salient to teacher educators, are (a) that victims should be encouraged to disclose to a responsible adult, such as a teacher, (b) that a supportive and non-judgmental response is vital, and (c) that tips for avoiding cyber bullying should be communicated to the young person. Many of those tips are easily accessible to teacher educators via those online resources.

In contrast to earlier studies that have reported gender differences in pre- and serving teachers' responses to different

kinds of bullying (Bauman et al., 2008; Boulton, 1997; Ellis & Shute, 2007; Novicka & Isaacs, 2010), none of our main effects were qualified by gender. Thus, the implications we discuss regarding cyber (and traditional) bullying would seem to apply to both genders. Some authors (Dooley et al., 2009) have suggested that we should not be surprised to find similarities between women and men with regard to cyber bullying issues, not least because the former are heavier email and text users than males, and that may “offset” males’ greater tendencies to be aggressive in other ways (Blair, 2003). Indeed, several studies have found gender differences in rates of being cyber bullies and victims (Slonje & Smith, 2008; Williams & Guerra, 2007; Ybarra & Mitchell, 2004). That gender differences sometimes but not always emerge on the same measures has also been noted elsewhere (Boulton, 2013a), and so the fact that our findings are inconsistent with (some) previous work is not unprecedented.

In evaluating the present study, our use of vignettes to solicit preservice teachers’ responses is a strength and a weakness. On the plus side, there is a literature which attests to the suitability of this method to address the issues we investigated. For instance, Poulou (2001) saw it as the ideal method to study teachers’ beliefs and intentions regarding specific incidents, and argued that information gleaned is particularly suitable for developing training materials. However, some authors (Bauman et al., 2008) have recently called for studies that measure what teachers *actually* do, and in this vein Boulton (2013b) showed the value of using a longitudinal design in which beliefs measured at one point in time are used to predict teachers’ *actual* future anti-bullying actions. Nevertheless, the influential theory of planned behavior (Ajzen, 1991), that is still the dominant explanation we have of the association between cognitions and behavior (Cooke & Sheran, 2004), regards behavioral *intentions* as one of the most important factors that can influence actual behavior. So, our finding that perceived seriousness, ability to cope, and empathy all predicted our participants’ intention to intervene in cyber bullying incidents (and other forms) strongly suggests that they will also influence their actual practice when they take up teaching posts to some degree.

A further limitation was that we used a global index of cyber bullying and did not, as we did for traditional bullying, consider subtypes. Given the findings of heterogeneous responses to the latter found here and elsewhere (Boulton, 1997; Craig et al., 2000; Kochenderfer-Ladd & Pelletier, 2008; Nicolaides et al., 2002; Ellis & Shute 2007), it is feasible to expect that pre- and serving teachers might differ in how they respond to, say, hostile phone calls/texts sent or received in school, and incidents on social networking sites occurring outside of school hours. Similarly, cyber bullying may sometimes be more akin to verbal traditional bullying (in that it involves words designed to hurt or upset the victim) and at other times have more in common with relational traditional bullying (in that highly visible Facebook attacks may be designed to damage victims’ social relationships and

standing). Given all of this, future studies should therefore include and compare subtypes of cyber bullying. The present study still contributes to current knowledge as it is the first *direct* comparison of preservice teachers’ reactions to traditional versus cyber bullying, and moreover, our evidence for a difference in participants’ responses to various subtypes of bullying provides a *prima facie* case for this more nuanced research.

There were other differences in the cyber versus traditional bullying scenarios we used that suggest caution in making direct comparisons. One difference is that in the former, either the perpetrators or victims were seen by the adult whereas both roles were observed in the latter scenarios. Again, the influence of these kinds of variables could usefully be examined in future studies. However, we believe that these differences should not mean that our comparisons are invalid, because they reflect realistic differences that teachers would likely encounter between face-to-face forms of traditional bullying and cyber bullying that commonly does not have victims and perpetrators physically together.

One reason we chose to study preservice teachers was because their beliefs would not yet have been shaped by their experiences in charge of pupils. This group may be more open to changing in a more desirable manner with the right training. Nevertheless, just like serving teachers, preservice teachers’ beliefs will still very likely be shaped by their own direct and vicarious experiences of bullying during their time as pupils. Future studies could usefully test if those experiences moderate the kinds of bullying beliefs and behavioral intentions we investigated. For instance, are trainee teachers who have been victims (or perpetrators) of some subtypes of bullying different from non-victims (non-perpetrators)? If significant effects are found, this would have implications for teacher education. It would suggest that a “one-size fits all” approach to that training would be inappropriate as subgroups that hold strong and least desirable beliefs may need more focused, and perhaps lengthier, training.

It should not be assumed that our findings, based as they were on a U.K. sample, can be generalized to other national and cultural contexts. Studies indicate large variations in some basic measures such as levels of subtypes of bullying, how the construct is conceptualized, and even tendencies to report reacting to it in certain ways (Due et al., 2005; Sentenac et al., 2013). These variations are thought to reflect cultural differences in what are regarded as appropriate help-seeking and help-giving behaviors. Hence, future studies would do well to determine if our findings, especially those relating to cyber bullying, can be replicated in pre- and serving teachers outside of the United Kingdom, and also to teachers within any given culture who may have been raised in or influenced by another culture. If not, again teacher educators would need to modify the content of their training to make it culturally appropriate.

Our study is also limited in that it did not elucidate the *reasons* why our participants did not feel confident in

dealing with cyber bullying. It is possible, even likely, that younger participants may be heavier users of electronic social media, understand it better, and have more direct experience of cyber bullying. Similarly, participants in later stages of their teacher training may change in how they view cyber, and other types of, bullying. Unfortunately, we were unable to measure these things, but it would be unwise to use age as a proxy for them. By soliciting such data, future studies would be much better placed to reveal the reasons behind the responses trainee teachers have to bullying situations.

In conclusion, this study has provided new information concerning preservice teachers' responses to cyber bullying. It showed that those responses were most similar to verbal traditional bullying, and rather distinct from physical and relational traditional bullying. It also provided the first evidence that beliefs concerning seriousness, ability to cope, and empathy collectively, and each one uniquely, significantly predicted intentions to intervene in cyber bullying episodes. As we have shown, these findings can guide training programs to help pre- and serving teachers deal with the increasing challenges presented by cyber bullying, and the ongoing challenges of traditional forms. Teachers have a vital anti-bullying role to play, and teacher educators can use findings from studies like this one to help ensure they are optimally prepared.

Appendix

Definitions of traditional and cyber bullying subtypes presented to participants (top), and the two bullying vignettes used for each subtype (bottom).

Bullying has been defined as an act in which someone knowingly harms another person, mentally or physically, over a period of time.

Physical bullying: is the repeated harming of another person through actions such as hitting, kicking, punching, and so on.

Verbal Bullying: is the repeated mocking of another person through name calling, teasing or derogatory remarks.

Relational Bullying: is repeated exclusion and ignoring of another person.

Cyber Bullying: is when a group or individual intentionally causes repeated harm and distress to another, using electronic forms of contact.

Cyber Bullying Vignettes

(1) You witness a group of children in the corridor just before your lesson looking at their mobile phones and laughing. You overhear them mention a name of a person in a mocking manner. You have witnessed similar situations before mocking the same person in the same way. (2) You witness a child look fearful as they look at their phone during free time. The child is then constantly looking over their shoulder. This is not the first time you have witnessed this behavior.

Physical Bullying Vignettes

(1) A student has bought in a large Easter egg to school. He boasts that he won it in a raffle. Another child goes over and smacks his head, demanding the Easter egg. The child refuses at first but eventually gives in. (2) You have directed the children in your class to work in groups of 4 to do projects. While the children are getting in their groups you see a student push another child with enough force that he falls to the ground. The push was clearly intentional and was not provoked. The child that fell yells, "Stop pushing me around! You always do this, just go away."

Verbal Bullying Vignettes

(1) At the writing center you hear a student chant to another child, "teacher's pet, Brown-nose, suck-up, kiss ass." The child tries to ignore the remarks but sulks at his desk. You saw the same thing happen the other day. (2) Your class is getting ready to go to lunch and the children are in a line at the door. You hear a child say to another child, "Hey give me your lunch money or I'll give you a fat lip." The child complies at once. This is not the first time this has happened.

Relational Bullying Vignettes

(1) When the pupils are sitting down for the lesson to start you overhear a pupil say to another pupil, "you can't sit next to here it's saved." This is not the first time you have heard this remark made to this pupil. (2) You have allowed the children in your class to have some free time, because they have worked so hard today. You witness a child say to another student, "No absolutely not. I already told you that you can't come over to mine." The student is isolated and plays alone for the remaining time with tears in her eyes. This is not the first time this child has isolated someone.

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