

Cyberbullying: its nature and impact in secondary school pupils

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Background: Cyberbullying describes bullying using mobile phones and the internet. Most previous studies have focused on the prevalence of text message and email bullying. **Methods:** Two surveys with pupils aged 11–16 years: (1) 92 pupils from 14 schools, supplemented by focus groups; (2) 533 pupils from 5 schools, to assess the generalisability of findings from the first study, and investigate relationships of cyberbullying to general internet use. Both studies differentiated cyberbullying inside and outside of school, and 7 media of cyberbullying. **Results:** Both studies found cyberbullying less frequent than traditional bullying, but appreciable, and reported more outside of school than inside. Phone call and text message bullying were most prevalent, with instant messaging bullying in the second study; their impact was perceived as comparable to traditional bullying. Mobile phone/video clip bullying, while rarer, was perceived to have more negative impact. Age and gender differences varied between the two studies. Study 1 found that most cyberbullying was done by one or a few students, usually from the same year group. It often just lasted about a week, but sometimes much longer. The second study found that being a cybervictim, but not a cyberbully, correlated with internet use; many cybervictims were traditional 'bully-victims'. Pupils recommended blocking/avoiding messages, and telling someone, as the best coping strategies; but many cybervictims had told nobody about it. **Conclusions:** Cyberbullying is an important new kind of bullying, with some different characteristics from traditional bullying. Much happens outside school. Implications for research and practical action are discussed. **Keywords:** Bullying, victim, cyber, mobile phone, internet, adolescence, aggression, computers.

'Bullying' is usually defined as being an aggressive, intentional act or behaviour that is carried out by a group or an individual repeatedly and over time against a victim who can not easily defend him or herself (Olweus, 1993). Several main types – physical, verbal, relational (e.g., social exclusion) and indirect (e.g., rumour spreading) – may be referred to as 'traditional' forms of bullying. Age and sex trends are well established (Smith, Madsen, & Moody, 1999).

In recent years bullying through electronic means, specifically mobile phones or the internet, has emerged, often collectively labelled 'cyberbullying'. A corresponding definition of cyberbullying is: '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'.

The potential for cyberbullying has grown with the increasing penetration of networked computers and mobile phones among young people. The Mobile Life Report (2006) found that 51% of 10-year-olds and 91% of 12-year-olds in the UK have a mobile phone. Awareness of cyberbullying in the UK appears to originate around 2001. The DfES pack 'Don't suffer in silence' (2000) does not mention cyberbullying; but a revision published in 2002 mentions 'sending malicious emails or text

messages on mobile phones' (p. 9). Press reports have since become frequent. Cyberbullying has clearly diversified beyond bullying by text messages or emails. Those referred to in recent press reports and websites, and mentioned by pupils in pilot work by the authors, involve mobile phones (bullying by phone calls, text messages, and picture/video clip bullying including so-called 'happy slapping', where a victim is slapped or made to appear silly by one person, filmed by another, and the resulting pictures circulated on mobile phones); and using the internet (bullying by emails, chat room, through instant messaging; and via websites). Some cyberbullying can combine the anonymity of the aggressor found in conventional indirect aggression with the targeted attack on the victim found in conventional direct aggression.

Previous research on cyberbullying

Research on cyberbullying is at an early stage. In the UK, Oliver and Candappa (2003) briefly mention text message bullying in students aged 12–13 years; 4% had received nasty text messages, and 2% had received nasty email messages. Balding (2005) gave a health-related questionnaire, with one question on cyberbullying, to pupils aged 10–11 yrs; 1% had been bullied by mobile phone. NCH (2005) surveyed 770 young people aged 11 to 19 yrs; 20% reported ever having been cyberbullied (14% by text message,

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5% through chat rooms, 4% by email); 28% of victims told no one they had been bullied.

Noret and Rivers (2006) surveyed 11,000 English pupils from 2002 to 2005; nearly 6% said they had received nasty or threatening text messages or emails 'once in a while' or more, in 2002 and 2003, but this rose to 7% or more in 2004 and 2005. Girls reported this more than boys, increasingly over the four years. This increase in cyberbullying contrasts with the rates for general bullying in England, which appear to be going down slowly, as anti-bullying work has an impact (ABA Factsheet, 2006).

In the USA, Ybarra and Mitchell (2004) surveyed internet use in 1,501 youths aged 10–17 years. Over the last year, 12% reported being aggressive to someone online, 4% were targets of aggression, and 3% were both aggressors and targets. Those who used the internet more at home were more involved as aggressors or victims; and aggressor/victims used it more frequently than non-involved youths. These authors hypothesised that some victims of conventional bullying may use the internet to attack others, in a form of compensation or revenge that is less dangerous to them than face-to-face attack. Ybarra, Mitchell, Wolak, and Finkelhor (2006) found that 9% of youths had been targets of internet harassment, and 38% of them reported distress as a result.

Raskauskas and Stoltz (2007) surveyed 84 students in the USA aged 13–18 years, of whom 49% were cybervictims (compared to 71% traditional victims) and 21% were cyberbullies (compared to 64% traditional bullies) at least once or twice over the last school year. Many cybervictims were also traditional victims, and most cyberbullies were also traditional bullies. The hypothesis that some traditional victims might also be cyberbullies (from Ybarra & Mitchell, 2004) was not supported.

Aims of the present studies

Previous research has mainly examined one or just a few common media of cyberbullying (text messages, email); and/or has measured cyberbullying as a global category. However, different media have different characteristics; we distinguish seven media of cyberbullying. We examine age and sex differences, which have not been consistent in previous research. Also, as some schools attempt to block or monitor mobile phone and internet use in school, the venue of cyberbullying (inside or outside school) needs to be assessed.

Cyberbullying causes distress (Ybarra et al., 2006), but its impact relative to traditional bullying is uncertain. The possible breadth of audience for cyberbullying (on websites or by circulating picture clips) might heighten impact, but the possibility of blocking electronic compared to face-to-face harassment might lessen impact. We report data on the relative impact of cyberbullying compared to traditional bullying as perceived by pupils.

Relatedly, many victims of traditional bullying do not seek help (Whitney & Smith, 1993); is this similar in cyberbullying? Finally, relative roles in traditional bullying and cyberbullying need to be clarified. The Ybarra and Mitchell (2004) hypothesis that many cyberbullies are conventional victims was not confirmed by Raskauskas and Stoltz (2007); we examined this in our second study.

We describe findings from two surveys. Study One, carried out in June/July 2005, was partially reported in a brief DFES publication (Smith et al., 2006); it is reported much more fully here, including responses to open-ended questions. Questionnaire findings were tested against focus groups with different pupils, to assess fittingness of the findings (Guba & Lincoln, 1981). Study Two, carried out in March 2006, was designed to check the generalisability of findings from Study One on a larger sample, and to relate cyberbullying experiences to internet use generally.

Methods

Both studies used an anonymous self-report questionnaire assessing seven different media of cyberbullying. In both studies, pupils were told that participation was optional, that their responses and their school would remain anonymous, and gave informed consent. Passive consent was obtained from parents (active consent in the case of focus groups). Pupils were given an information sheet to take home, with contact numbers and websites if they or a friend needed advice or help. Procedures were approved by the institutional ethics committee.

Study One

Following piloting, a questionnaire was used, partly following Olweus' Bully/Victim questionnaire, which has established construct and discriminant validity (Solberg & Olweus, 2003). After initial demographic questions, there was a definition of bullying (as in the Olweus questionnaire), followed by a statement about cyberbullying as including the seven media: through text messaging; pictures/photos or video clips; phone calls; email; chat rooms; instant messaging; and websites. Two general questions asked whether the pupil had experienced bullying of any kind, and then specifically cyberbullying, in the past couple of months (5-point scales: never; only once or twice; 2 or 3 times a month; about once a week; several times a week). Multiple-choice questions asked, for each of the seven media, how often pupils had experienced being cyberbullied or had cyberbullied others (same 5-point scales), separately for inside and outside school; whether they had heard of that type of cyberbullying taking place in their school or circle of friends in the past couple of months (yes/no); the perceived impact compared to traditional bullying (less, the same, more); the number, gender and class of those who had cyberbullied them; how long it had lasted; whether and whom they had told; and whether they felt that banning

mobile phones or internet in school would help to avoid that type of cyberbullying. Open-ended questions allowed pupils to give more detailed answers on examples of cyberbullying, reasons for perceived impact, and suggestions for stopping it. The time-frame was the 'past couple of months'.

Participants

Secondary schools in London LEAs were invited to participate. Twenty agreed, and named a teacher responsible for administration; in late June 2005, each teacher gave a questionnaire to one boy and one girl (selected randomly) from each of years 7–10, to complete individually and privately and place in a sealed envelope. Fourteen schools sent back completed questionnaires; the total number was 92 (after 2 were rejected due to incompleteness). These came from 43 boys (19 younger; 24 older) and 49 girls (24 younger; 25 older); younger = 11–13 years, older = 14–16 years. Fifty-four pupils were White, 10 Afro-Caribbean, 7 Black African, 7 Indian, 1 Chinese, 3 mixed race and 10 other; a reasonably representative ethnic mix for the London area. The schools represented a range of socioeconomic backgrounds, but several served quite deprived areas.

Focus groups

Findings from the questionnaires were subsequently tested with focus groups of pupils aged 11–15 years, one in each of another six secondary schools in the London area. In total, 47 boys and girls contributed. The groups (all with 7 or 8 pupils) were held by one of the authors (SF) in a pre-booked room in school and lasted about 40 minutes. Using a semi-structured format, pupils were asked what they thought the study had found (incidence of cyberbullying overall, by media, and in/out of school; age and sex differences; perceived impact), and why they thought this; they were then told the actual finding and responded to that. Pupils were also asked to discuss practical advice in dealing with cyberbullying. Responses were recorded and content analysed to give main themes; an independent coder coded statements into the same themes with a concordance of 83.5%. Illustrative examples of main themes are presented.

Study Two

Following demographic information, this questionnaire asked about internet use (time spent per week, 5-point scale; and main activities done on internet). Definitions of bullying and cyberbullying were given, and then a series of questions on bullying (not including cyberbullying) and cyberbullying; starting with whether they knew of anyone who had been (cyber)bullied, either inside or outside school; on whether they had ever been (cyber)bullied, which medium, how long ago this had happened, and whether they told anyone; and corresponding questions on whether they had taken part in (cyber)bullying others. The seven media of cyberbullying were then listed separately, and pupils rated how harmful each was compared to 'traditional' bullying

(less, the same, more). Finally pupils chose the best ways to stop traditional, and cyber, bullying from lists of alternatives.

Participants

Of twenty secondary schools approached, five agreed to participate; from Leicestershire (2), Hertfordshire, Norfolk, and Staffordshire. Three schools had pupils from relatively advantaged backgrounds, one covered a wide range, and one served an area of considerable social disadvantage. Questionnaires were posted to schools and given to classes by teachers briefed on the methodology; questionnaires analysed (after 7 were dropped for incompleteness) numbered 116, 182, 69, 73 and 93 respectively, totalling 533. These came from 261 boys and 267 girls (5 missing gender); and 243 from year 7 (aged 11–12), 97 + 68 = 165 from years 8 and 9 (aged 12–14), and 76 + 36 = 112 from years 10 and 11 (aged 14–16) (13 missing year data). The majority of pupils were White (82.8%), followed by Indian (6.1%), mixed race (3.4%), Pakistani and Bangladeshi (2.9%), Asian other (1.5%), Black (1.0%), Chinese (.8%) and other (1.7%); a reasonably representative ethnic mix for England generally, except for the low proportion of Black pupils.

Results

Incidence of bullying compared to cyberbullying in school

In Study One the incidence of being bullied/cyberbullied in the last couple of months was: for general bullying, 14.1% often (two or three times a month, once a week, or several times a week), 31.5% only once or twice, and 54.3% never; for cyberbullying, the respective figures were 6.6% often, 15.6% only once or twice, and 77.8% never.

In focus groups, most pupils suggested a high percentage of students would have experienced cyberbullying, the consensus ranging from 67–100% in different groups; justified by responses such as 'everyone would get these messages because everyone has a phone'. This was much more than the 22% from questionnaires (including 'once or twice' responses); when informed of this, pupils often made sceptical comments: 'not many people would admit to it', 'because they get threatened if they told'.

In Study Two, when pupils were asked how long ago they had been bullied (not including cyberbullied): 13.5% replied in the last week or month; 5.9% this term, 13.7% the last school year, 25.0% over a year ago, and 41.9% never; when asked how long ago they had been cyberbullied, 5.3% replied in the last week or month; 5.1% this term, 3.7% the last school year, 3.1% over a year ago, and 82.7% never.

Correspondingly, when asked how long ago they had taken part in bullying others, 9.2% replied in the last week or month; 4.4% this term, 4.8% the last school year, 7.4% over a year ago, and 74.3% never.

When asked how long ago they had taken part in cyberbullying, 6.5% replied in the last week or month; 2.8% this term, 1.8% the last school year, 1.4% over a year ago, and 87.6% never.

Incidence and awareness of different media of cyberbullying

Table 1 shows data for the seven media of cyberbullying; for Study One, percentages of pupils who experienced it once or twice, or more than once or twice, separately for inside and outside school; and who said that they had heard of bullying taking place through that type of cyberbullying in their school or circle of friends; all in the past couple of months; for Study Two, having ever experienced. Typical comments written in by pupils are in electronic appendix Table 1.

In Study One phone call and text message bullying were most common, both inside and outside of school. However, pupils were most aware of picture/video clip bullying taking place, with other media following the same pattern as for reported experiences.

When asked about the most common media of cyberbullying, many focus group pupils said text messaging, due to its anonymity: 'they won't know who you are'. When informed that phone call bullying was reported most frequently, one explanation offered was the lack of concrete evidence compared to text message bullying: 'it's evidence as a text message, you can show it'; another explanation was the greater satisfaction the perpetrator might get from a phone call: 'if phone, more personal speaking than texting because you're actually saying it to them'. However, when asked which type of cyberbullying was most heard of, pupils generally commented picture/video clip bullying, as found in the survey: 'like happy slapping'. They correctly guessed that internet chat room bullying would be least heard of: 'because don't know people on there'.

In Study Two, again phone call bullying was comparatively frequent, but here level with instant messaging; followed by text message bullying.

In both studies, fewer pupils reported cyberbullying others than being cyberbullied, with phone call and instant messaging most frequent.

Incidence of being a cyber victim inside and outside school

In Study One all media of being cyberbullied or cyberbullying others were equal or greater out of school than inside school, whichever criterion is used, apart from email bullying others more than just once or twice; see Table 1.

Focus group pupils also thought that cyberbullying occurred more often outside of school. Inside school was less likely because 'phones are excluded in school', 'inside teachers can track them down'; whereas outside school 'no one is checking you', 'they want to get them outside as well'.

In Study Two more pupils had experienced ever being bullied (not including cyberbullying), inside school (37.0% only inside, and 12.4% both) than outside school (4.7% only outside, 12.4% both); but more had experienced cyberbullying outside school (11.1% only outside, 2.6% both) than inside (3.4% only inside, 2.6% both); the comparison being highly significant, $\chi^2_{(1)} = 67.7, p < .001$.

Who were the cyberbullies?

In Study One, three questions about who had done any cyberbullying were asked for each of the seven media. A relatively small number of pupils had experienced each medium; trends were similar for each type, so overall figures are reported. From 82 replies regarding class/year group of bullies, some were reported to be in the same class (20.7%) or a different class in the same year group (28.0%), and a few from higher years (6.1%) or different years (2.4%), none from lower years; some were not from their school (22.0%). Some respondents did not know who bullied them (20.7%). From 70 replies regarding the gender of bullies, responses were unknown (25.7%), one boy (24.3%), one girl (21.4%), several girls (18.6%), several boys (7.1%) or both boys and girls (3.0%). From 74 replies regarding

Table 1 Incidence of seven different media of cyberbullying: Study One and Study Two

Type of cyberbullying	Phone call	Text message	Email	Picture/video clip	Instant messaging	Website	Chatroom
Study One: percent victim or bully more than once or twice (including once or twice in brackets)							
Victim in school	3.3 (14.3)	3.3 (14.3)	3.3 (5.5)	0 (6.5)	0 (5.5)	0 (5.5)	0 (1.1)
Victim outside school	10.9 (25.9)	3.3 (17.6)	4.4 (10.9)	0 (6.5)	3.3 (5.5)	1.1 (5.5)	0 (5.5)
Bully in school	1.1 (3.3)	0 (2.3)	2.2 (2.2)	0 (2.2)	0 (3.3)	0 (2.2)	0 (0)
Bully outside school	1.1 (7.6)	1.1 (3.4)	1.1 (3.3)	0 (3.3)	1.1 (4.4)	0 (2.2)	0 (2.2)
Study One: Percent aware of cyberbullying in school or circle of friends							
Awareness of cyberbullying	37.0	29.3	24.4	45.7	25.3	19.1	12.1
Study Two: Percent ever a victim or bully							
Victim	9.5	6.6	4.7	5.0	9.9	3.5	2.5
Bully	4.3	2.8	2.4	1.8	5.3	2.4	1.0

number of students doing the bullying, responses were one student (39.2%), 2–3 students (24.3%), unknown (18.9%), 4–9 students (16.2%), several different groups (.9%), with no one reporting more than 9 students.

Age/year group differences in cyber victim/bullying

For Study One, ANOVAs with two factors (year, gender) were carried out on frequencies of being bullied overall, being cyberbullied overall, and a corresponding MANOVA for the seven media of being cyberbullied inside and outside school, taking scores as on a 5-point scale (1 = never to 5 = several times a week). No significant age effects or interactions were found.

In focus groups, many pupils either did not know, or thought that no age difference occurred in cyberbullying activity. One pupil commented 'there's enough secrecy so you're not going to know' and another 'you don't know what older years get up to'; a reason for no age differences was 'older kids think they're big so they can do it ... younger kids think they can copy them, and not get in trouble because they won't get suspected'. However, one comment was 'when you're younger, you're less likely to get cyber bullied'.

In Study Two, with a larger sample, older pupils were more likely to have ever cyberbullied others, $\chi^2_{(2)} = 14.20$, $p < .001$; 8% at year 7, 12% at years 8–9, 23% at years 10–11. Examining media, using Bonferroni correction (so $p < .007$) this was significant for text message bullying, $\chi^2_{(2)} = 14.01$, $p < .001$; picture/video clip bullying, $\chi^2_{(2)} = 11.93$, $p < .003$; and instant messaging bullying, $\chi^2_{(2)} = 20.11$, $p < .001$. A trend for older pupils to have ever been cyberbullied (14% at year 7, 19% at years 8–9, 26% at years 10–11) was not significant overall, but was significant for website bullying, $\chi^2_{(2)} = 9.88$, $p < .007$.

Sex differences in cyber victim/bullying

In Study One, the ANOVA revealed a significant main effect of gender. Girls were more likely to be victims overall, $F_{(1,86)} = 4.87$, $p < .05$ (girls = 2.04, boys = 1.51) and to be cyberbullied, $F_{(1,86)} = 4.53$, $p < .05$ (girls = 1.54, boys = 1.17). A corresponding MANOVA on the seven media inside and outside of school was not significant.

In the focus groups, pupils generally thought that girls would be more involved in cyberbullying than boys. This was mainly substantiated by presenting examples and reasons of how boys behave: 'because boys are more physical', 'girls hold grudges for longer, boys deal with it there and then and get it over with'.

In Study Two, there was no significant gender difference (on chi-square tests) for ever having been cyberbullied, or having cyberbullied others. When

looking at media of cyberbullying, gender differences were non-significant following Bonferroni correction.

Relations between traditional bullying and cyberbullying

From Study Two, many cybervictims were traditional victims, and many cyberbullies were traditional bullies (see Table 2). Testing the Ybarra and Mitchell hypothesis, traditional victims did also tend to be cyber bullies, on a one-tailed test; of the 42 traditional victims who were also cyberbullies, 30 were in fact traditional bully-victims.

Focus group pupils provided comments on why pupils thought some students might engage in cyberbullying. Some perceived the bully's motivation as due to a lack of confidence and desire for control: 'bullying on the computer is quite cowardly, because they can't face up to the person themselves'; 'people are too scared to do stuff face to face'; 'there is less fear of getting caught'. Another theme was how the lack of face-to-face interaction in cyberbullying reduces empathy in bullies. Cyberbullying was often described as entertainment: 'they do it more for fun', 'they just got bored and were entertaining themselves'.

Internet use and involvement as cyber bully/victim

From Study Two, virtually all pupils (99%) used the internet – for 0–5 hours per week (46.4%), 5–10 hours (25.6%), 10–15 hours (15.0%), 15–20 hours (7.3%), or 20 or more hours (5.6%). Most pupils used it at home, and about half, at school. Highest usage was for playing games (72.3%) and school work (68.5%), but many used instant messaging (58.7%), emailing (48.5%), and chat rooms (19.1%).

Using independent sample *t*-tests, no significant differences were found in frequency of internet use

Table 2 Contingencies between being (a) a traditional victim and cybervictim, (b) a traditional bully and cyberbully, and (c) a traditional victim and cyberbully, from Study Two

(a)	Not cyber victim	Cyber victim	Chi-square, <i>p</i>
Not traditional victim	222	16	$\chi^2_{(1)} = 34.86$ $p < .0001$
Traditional victim	209	75	
(b)	Not cyber bully	Cyber bully	
Not traditional bully	376	16	$\chi^2_{(1)} = 102.91$ $p < .0001$
Traditional bully	77	48	
(c)	Not cyber victim	Cyber victim	
Not traditional victim	214	23	$\chi^2_{(1)} = 3.22$ $p < .05$ (one-tailed)
Traditional victim	239	42	

(scored 1 to 5 as above) for pupils engaged in either traditional or cyberbullying, or for traditional victims. Cybervictims did use the internet more than those who were not cybervictims, means of 2.41 vs. 1.92, $t_{(520)} = 3.59$, $p < .0001$. Looking at media, after Bonferroni correction this effect was significant for website (mean = 3.22, $p < .001$), chat room (mean = 3.15, $p < .001$), email (mean = 2.71, $p < .003$) and instant messaging (mean = 2.53, $p < .001$) victims.

Duration and impact of cyberbullying

In Study One, respondents were asked how long each type of cyberbullying had lasted. Summing over all media, 69 responses were obtained: most said it had lasted one or two weeks (56.5%), followed by about a month (18.8%); fewer replied about six months (5.8%) or about a year (8.7%), with some, however, saying it had gone on for several years (10.1%).

In both studies pupils were asked whether they thought cyberbullying has more, the same, or less impact on victims than traditional bullying. An impact factor was calculated for each medium of cyberbullying, by scoring less effect = -1, same effect = 0 and more effect = +1, divided by total number of respondents excluding 'don't know's. If an impact factor is positive, that medium is perceived as having more of an effect compared to traditional bullying; if negative, then less of an effect. Results are shown in Table 3. Using the 3-point scale, *t*-tests against zero baseline, and pairwise comparisons (with Bonferroni correction) were carried out; details are given in electronic appendix Table 2a,b.

In Study One, *picture/video clip* bullying had a significant positive impact factor, and *chatroom* bullying a negative one; other kinds of cyberbullying had similar impact factors to traditional bullying. Most pupils added open-ended comments to justify their responses; the most frequent themes are given in electronic appendix Table 3. Similar themes were picked up in focus groups. Many pupils thought that cyberbullying has the same effect on the victim: 'I think they are equally as bad'; 'they both can hurt'. The main difference commented on was the anonymity that most cyberbullying entails: 'you don't

know who it is, so more scared'; '[in face-to-face bullying] you know who it is - there's advantages and disadvantages to that'. Cyberbullying could be worse: 'you haven't got friends around you to support you'; 'loads of people can see it if it's on the internet'; 'it's constant all the time, really hard to escape'; or it could be less harmful: 'you can be more damaged by face-to-face bullying than cyber bullying, that's just words'; 'a text is easier to ignore than something that happened in a specific place'.

In Study Two, *picture/video clip* bullying again had a high impact factor, and (unlike Study One) *phone call* and *text message* bullying had low impact factors; other kinds of cyberbullying had similar impact factors to traditional bullying.

Pupils' views on the best ways to stop cyberbullying

In Study One, only a minority of pupils (range 13–23%, mean 20% over different media) responded that banning mobile phones or private internet use in school would help to prevent cyberbullying; over half believed that even if mobile phones were banned, they could still be used secretly, and internet-based bullying would just happen after school.

In focus groups, a common pessimistic theme was that little can be done to reduce cyberbullying: 'I don't think you can ever stop cyberbullying at all because you'd basically have to get rid of all the communication things that we love and you can't do that', 'you might do a lot of things to them but it still ain't going to stop them'. This pessimism was reinforced by frequent references to the anonymity in cyberbullying: 'with cyber, you never know who it really is', 'you can't report it because you don't know who they are', 'bullies can hide themselves, change identity'. The most common practical advice was to block or ignore cyberbullying. This was so both for mobile phones: 'if you see a text from a random number, reject it'; and for the internet: 'don't retaliate', 'turn off your computer', 'if harassment on the internet, block them'. In general, for all media of bullying, telling was often recommended: 'talk to someone trustworthy', 'always tell an adult', 'tell someone, police, teachers, parents'; and specifically for cyberbullying, 'get police to track down withheld number', 'report abuse on message board'. Some

Table 3 Perceived impact of seven different media of cyberbullying, compared to traditional bullying: Study One and Study Two

	Phone call (P)	Text message (T)	Email (E)	Picture/video clip (V)	Instant messaging (I)	Website (W)	Chatroom (C)	Significant differences
Study 1	.21	-.04	-.24	.37***	-.32	.02	-.39***	V > T,E,I,C P > E,I,C
Study2	-.43***	-.20***	.02	.53***	-.07	-.02	-.09	V > E,W,I,C,T,P E > I,C,T,P W,I,C > T,P T > P

*** $p < .001$ (compared to zero baseline).

pupils thought that bullies should be made aware of the consequences: 'let people know what is going to happen about bullies', 'support campaigns so people realise how serious it is', 'show bullies how it feels'.

In Study Two, pupils checked the best ways to stop traditional and cyberbullying. Popular responses for traditional bullying were 'telling someone (parent/teacher)' (73.3%), 'making new friends' (46.9%) and 'sticking up for yourself without fighting' (44.1%), followed by 'ignoring it' (40.0%), 'avoiding the bullies' (34.3%), 'keeping a record of bullying incidents' (34.1%), 'reporting it to police/other authorities' (32.9%), 'fighting back' (32.9%), and 'asking them to stop' (26.9%); less popular advice was 'staying away from school' (5.5%). For cyberbullying, popular responses were 'blocking messages/identities' (74.9%), 'telling someone (parent/teacher)' (63.3%), 'changing email address/phone number' (56.7%), and 'keeping a record of offensive emails/texts' (46.5%), followed by 'ignoring it' (41.3%), 'reporting to police/other authorities' (38.5%), 'contact service provider' (31.1%), and 'asking them to stop' (21.4%), with the least popular advice being 'fighting back' (19.6%).

Telling about cyberbullying

In Study One, whether victims of cyberbullying had told anyone did not vary noticeably by media. Summed over all media, from 71 cases, 43.7% said they had told nobody. The 56.3% who had told comprised those who told friends (26.8%), followed by parents/guardians (15.5%), and more rarely a class teacher or another adult at school (each 8.5%), or somebody else (1.4%). In Study Two, pupils who had ever been bullied (not cyber), or cyberbullied, were simply asked if they had told anyone. Telling was significantly more likely for victims of traditional bullying (70.2%) than for victims of cyberbullying (58.6%), $\chi^2_{(2)} = 4.09, p < .05$.

Discussion

The two surveys plus the focus groups provided a range of quantitative and qualitative information on cyberbullying. Another strength of the studies is the range of schools surveyed (14 in Study One, 5 in Study Two); any survey carried out in just one or two schools may give far from typical results. Each study also has limitations. Study One had a small sample, and possibly schools did not select pupils randomly; but those who responded, perhaps because it was not in a class setting, took the questionnaire seriously, with many informative comments written in for the open-ended questions. Study Two had a larger sample, but asked about whether pupils had 'ever' been involved in cyberbullying (and how long ago), and did not provide recent incidence for each type of cyberbullying.

Schools sampled were those that agreed to participate.

Both studies showed that frequencies of participation in cyberbullying are less than in traditional bullying, but are appreciable. Some 5–10% of pupils report being cyberbullied in the last couple of months or last term. The recentness of cyberbullying is also brought out in Study Two; whereas for traditional bullying more pupils reported last being bullied over a year ago (25.0%) compared to during the current term (19.4%), for cyberbullying many fewer reported being cyberbullied over a year ago (3.1%) compared to during the current term (10.4%). The focus groups found that pupils think a higher incidence of cyberbullying is occurring than was found from the anonymous surveys. This may be due to a reluctance to admit to being cyberbullied (as some pupils suggested), but (given some evidence for validity of anonymous questionnaires, Solberg & Olweus, 2003) more likely reflects the widespread awareness of cyberbullying (Table 1) and the wide audience that much cyberbullying reaches.

Pupils were especially aware of picture/video clip bullying happening, probably because this medium achieves a wide local audience. However, the most frequent media of cyberbullying involved mobile phones in other ways (call, text messages); or in Study Two by instant messaging on the internet. Given the recentness of cyberbullying, it is likely that there will be changes in the frequency of different media, fuelled by technological changes, accessibility, and by media publicity (for example, the 'happy slapping' phenomenon appears to have spread from a televised advertisement some years ago).

Both studies found that cyberbullying, unlike traditional bullying, is experienced more out of school than in school. Many schools place restrictions on mobile phone and internet use within school premises – as also pointed out in the focus groups. Nevertheless, Study One indicated that in 57% of cases the victim knows that the perpetrator(s) are from their school (and in 49% of cases, their class or year group). Thus, even if messages are sent and/or received out of school, often the problems will come back to the school the next day. It is not an issue that schools can ignore by simply banning mobile phone/internet use in school; although it is a natural step for schools to take, only a minority of pupils (around 20%) thought that this could help stop cyberbullying generally.

Who gets involved in cyberbullying? Study One showed that although the identity of the perpetrator(s) is unknown in one-fifth of cases, when known it is usually 1–3 pupils involved. For traditional bullying, victim reports decrease with age (Smith et al., 1999); bully reports stay rather constant although there is a shift from physical to more indirect and relational forms (Olweus, 1993). Ybarra and Mitchell (2004) found that older students (15+ years)

were more often internet aggressors than younger students (10–14 years), and in Study Two we found an increase in involvement as perpetrators and possibly victims, over the 11- to 16-year age range. The indirect and technological nature of cyberbullying may produce different age trends from much traditional bullying.

Gender differences appear uncertain at present. In traditional bullying, boys are more usually the aggressors, while there is little gender difference in being a victim (Olweus, 1993). However, whereas boys predominate in physical bullying, girls are at least relatively more involved in indirect and relational bullying. Cyberbullying is in some respects like indirect bullying (not face to face), so girls might be more involved; but the technological aspect might appeal more to boys. Noret and Rivers (2006) reported more of an increase in girls, than boys, over the last few years. However, Ybarra and Mitchell (2004), and Raskauskas and Stolz (2007) found no significant gender differences for internet or electronic aggressors or victims. We did find girls to be more often victims of cyberbullying in Study One, and the victims suggested that when known, the bullies were girls as or more often than boys. Focus group pupils often guessed that girls would be more involved. This was not confirmed in Study Two, where no gender differences were found for ever being a cybervictim or cyberbully; but the lack of a gender difference for bullying others does suggest a greater involvement of girls relative to traditional bullying, where boys predominate (Olweus, 1993; Whitney & Smith, 1993).

So far as being a victim of cyberbullying is concerned, one risk factor identified here is use of the internet; not surprisingly, those students who use the internet more appear to be at greater risk of experiencing at least some cyberbullying.

In line with Raskauskas and Stoltz (2007), we found that cyber victims had also often been traditional victims, and cyber bullies had often been traditional bullies; but as Table 2 indicates, many traditional victims or bullies were not cyber victims or bullies, since cyberbullying is substantially less frequent. We found some support for Ybarra and Mitchell's (2004) hypothesis that some traditional victims are cyberbullies; our result was marginally significant, so needs further confirmation. Although this hypothesis was not confirmed by Raskauskas and Stolz (2007), their sample ($n = 84$) was too small to provide an adequate test. A potentially important aspect of our data is that the majority (30/42 or 71%) of traditional victims who are cyberbullies, were in fact traditional bully/victims. The research on traditional bullying shows that bully/victims characteristically come from more abusive families (Schwartz, Dodge, Pettit, & Bates, 1997), show greater internalising and externalising problems (Stein, Dukes, & Warren, 2007; Wolke, Woods, Bloomfield, & Karstadt, 2000), and have a poorer

prognosis for psychiatric difficulties and suicidal ideation (Ivarsson, Broberg, Arvidsson, & Gillberg, 2000). The hypothesis that traditional bully/victims may get involved in cyberbullying, possibly to get revenge on those they feel have bullied them, deserves further study.

A factor often emerging from the focus groups was the belief that cyber bullies took part for 'entertainment': 'they might just want to have a bit of fun, so they use technology instead of face to face'. 'Just having fun' is often used as a rationalisation by pupils who bully others, and as an explanatory factor by other pupils (Smith, Talamelli, Cowie, Naylor, & Chauhan, 2004). In so far as it might be true, it raises the issue of why some pupils would think it 'fun' to bully others. In cyberbullying, the perpetrator is less likely to see any direct response from the victim; this might reduce direct gratification for pupils who enjoy watching pain inflicted on others, but might also reduce any inhibition of inflicting pain due to empathy at seeing the victim's distress. The perpetrator may get some peer rewards through sharing their abusive actions (most obviously, in picture/video clip bullying), thus amusing others in their gang and constructing the wider audience often involved in cyberbullying. The 'fun' and 'social prestige' factors may be alternatives to the 'seeking revenge' factor postulated by Ybarra and Mitchell (2004), or it may be that it is the bully/victims who both seek revenge and are most inclined to get satisfaction or see it as 'fun' when someone else is humiliated, whether or not an audience is present.

The negative correlates of bullying experiences are well documented for victims of traditional bullying (Hawker & Boulton, 2000). Does cyberbullying have a comparable impact? Study One data indicated that about three-quarters of cyberbullying cases were of short duration (up to about a month), but one-quarter continued for some time (several months, or even years). Even a short duration of being a cyber victim might have severe effects, given the potentially wide audience that some media can reach. Our data is only on pupil beliefs. These were that picture/video clip bullying, distributing abusive images of the victim widely in the peer group, would have a strong negative impact on the victim, much more than traditional bullying (Table 3). Other media of cyberbullying were not generally seen as having greater impact and sometimes less so. The focus groups indicated that while some pupils think that the anonymity can make the impact worse, many feel it is similar in impact to traditional bullying, and some believe it has less impact, because you are not hurt physically and can take avoiding action so far as messages are concerned.

Pupils expressed some pessimism in focus groups about the possibility of preventing cyberbullying; this pessimism was also encountered by Owens, Shute, and Slee (2000) in their focus group study of girls (traditional) bullying. In one sense pessimism is

justified: it is unlikely that bullying can be 'eradicated', and large-scale programmes to reduce school bullying have often had only modest success (Smith, Pepler, & Rigby, 2004). Nevertheless, there are strategies available for working with traditional bullying, as in the government pack 'Don't Suffer in Silence' (DfES, 2002). The 'telling' strategy now appears quite well embedded in UK schools (Smith et al., 2004); in Study Two 'telling someone' was the most popular strategy advocated by pupils for traditional bullying (73%) and the second most popular for cyberbullying (63%). However, the most popular strategies pupils advocated for cyberbullying were avoidance: blocking messages or identities (75%) or changing one's email address or phone number (57%); this was much larger than those advocating avoidance for traditional bullying (34%). These general views were also expressed in focus groups.

Reported rates of victims of cyberbullying actually telling anyone in order to get help were 56% in Study One and 59% in Study Two; these appear low compared to rates for victims of traditional bullying (Whitney & Smith, 1993); and in Study Two, victims of traditional bullying were significantly more likely to tell someone. If there is an increased reluctance to seek help for victims of cyberbullying, it is important to find out why. Study One data suggest that when victims do tell someone, it is often friends and seldom someone at school. School may be perceived as less relevant, given that much cyberbullying happens outside school. Adults may seem less informed about cyberbullying issues and therefore less likely to be approached; this remains an untested hypothesis from our data, but if substantiated would reinforce the need for awareness raising amongst teachers and parents about cyberbullying and preventative measures. It is also worth considering whether ignoring or avoidance strategies, normally considered less productive or affirming responses to traditional bullying than telling, may be more effective for much cyberbullying, with adult intervention needed in rarer media such as picture/video clip bullying (which cannot be avoided by the victim).

Conclusion

There are important implications of our findings and those of others, both for research, and for practical action to help children and young people. From a research viewpoint it is important to include cyberbullying in current questionnaire and nomination instruments; and to consider different varieties of cyberbullying, rather than taking them as a global phenomenon. They vary in perceived impact, and are quite possibly differentiated by age and gender.

An under-researched area is the importance of the media in spreading knowledge of cyberbullying, and fashions such as 'happy-slapping'. The apparent

increase in popularity of instant message bullying in Study Two (nine months after Study One) may be due to sampling differences, but might reflect a genuine shift. The recency of cyberbullying, and continuing rapid technological changes, mean that studies should give the date of data collection. Historical factors are important, and we need to monitor new media of cyberbullying as they arise.

A major practical step is to increase awareness among adults. Many adults of the current parental generation are not aware of the varied potential of mobile phones and the internet, to the same extent as young people (Quadrello et al., 2005). An obvious step is to include cyberbullying explicitly in school anti-bullying policies and anti-bullying materials, and in teacher training materials for anti-bullying work; as well as provide guidance for parents, and guidance for children and young people. While some traditional methods for reducing bullying may be useful for cyberbullying too (such as curriculum work, and peer support), some more specific interventions will be helpful, including how to contact mobile phone companies and internet service providers, and legal rights in these matters. Guidelines on dealing with misuse of mobile phones and the internet, and coping with cyberbullying, are now becoming available (DCSF, 2007; Willard, 2006). Future research can continue to inform the development of these measures.

Supplementary material

The following supplementary material is available for this article:

Appendix Table 1

Appendix Table 2a,b

Appendix Table 3

This material is available as part of the online article from: <http://www.blackwell-synergy.com/doi/abs/10.1111/j.1469-7610.2007.01846.x> (This link will take you to the article abstract).

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