

The Prevalence & Correlates of Cyberbullying in Adolescence: Results of a Five-Year Cohort Study

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Abstract
Recent media coverage has highlighted the growing prevalence of cyberbullying, however to date this new form of aggressive behaviour has received relatively little research attention compared to other aspects of bullying behaviour. In this study 14,281 pupils were surveyed annually over a five year period, using an adapted version of the Olweus Bullying Questionnaire (Olweus, 1991; Whitney & Smith, 1993). The results showed that over the five year period the prevalence of cyberbullying increased from 14.5% to 20.6% particularly among girls. Analysis also found cyberbullying to be the second most frequently reported type of bullying, following direct verbal forms of bullying, such as name-calling. Suggestions as to how cyberbullying can be tackled in line with current anti-bullying strategies as well as future directions for research are discussed.

Introduction
In recent years there has been increased attention given to the topic of Cyberbullying, and the ways in which adolescents bully each other using technologies such as the mobile phone and the internet. Campbell (1995) defines cyberbullying as bullying which is committed using media and communication devices, and can include behaviours such as sending nasty or threatening text messages via mobile, creating insulting and critical websites about someone, sending threatening, insulting or nasty messages over the internet, through social networking sites such as BEBO or MySpace, or on instant messenger programmes such as MSN Messenger. Previous research has suggested a prevalence rate of between 19 and 25% of adolescents reporting being a victim of cyberbullying, (Ybarra & Mitchell, 2004; MSN, 2006). Research findings in terms of gender differences have been somewhat ambiguous with some studies finding a gender difference with more females reporting being cyberbullied (i.e. Kowalski et al 2005), however other studies such as Li (2006) have found little gender difference in reports of being a victim of cyberbullying.
The aim of this study is to examine the prevalence of cyberbullying in an adolescent sample, and the degree to which this has changed over a five-year period. Due to the somewhat ambiguous findings of previous research studies, this study also aims to examine any gender differences that may exist in the prevalence of cyberbullying. Furthermore this study aimed to build on previous research to examine further correlates of cyberbullying.

Method
Design: This study reports on one aspect of a much larger 5 year cohort study employing a survey design.
Participants: Over the past 5 years 14,281 adolescents have participated in the study. 50.3% were female and 49% were male, 0.7% (n = 100) did not disclose their gender. In the last two years all participants were taken from Years 7 and 8 (11 to 13 years of age), in the first 3 years of the study some participants were also taken from year 9 (age 13 to 14).
Survey Tool: An adapted version of the Olweus bullying questionnaire was used (Olweus, 1991; Whitney & Smith, 1993). Of interest to this study were participants responses to the questions *Have you ever received any nasty or threatening text/messages/emails*. In the 2006 survey this question was separated into two to ask about the receipt of nasty or threatening text messages and then a separate question on the receipt of nasty or threatening emails. The questions were answered on a 6 point Likert scale ranging from *I never/ I received any to All the time*.
Procedure: The project was conducted with the co-operation of the Local Education Authority and each year data collection took place in the summer term. All participants completed a copy of the questionnaire in class time. The questionnaires were distributed and collected in by the teacher and then returned to the researchers for analysis.

Results
Figure 1 shows the differing prevalence rates of four types of bullying over the five-year period. This figure shows that Direct Verbal forms of bullying are the most commonly reported form of bullying across all five years. Cyberbullying is now the second most commonly reported form of bullying reported by the sample, and rates of cyberbullying have risen gradually over the four year period before levelling off in the fifth year. This type of bullying was more prevalent than direct physical and indirect forms of bullying.
The changing prevalence rates were also examined by gender. As Figure 2 shows, among girls, direct verbal forms of bullying have been the most frequently reported over the five year period, followed by reports of cyberbullying (rising from 14.5% to 20.6%). Figure 3 shows the changes in prevalence rates of different types of bullying in boys. The pattern in boys was somewhat different to that found in girls. With the exception of the first year, this was then followed by direct physical forms of bullying. In boys, cyberbullying was found to be the third most prevalent type of bullying. As this figure also shows, rates of cyberbullying have actually fallen in boys over the five year period. In the first year the prevalence rate was 12.2%, which has fallen to 10.4% in the last year.
As Figure 4 shows, victims of cyberbullying reported having fewer friends than those who were not cyberbullied, chi-square analysis found a significant association between being cyberbullied and reports of having fewer friends, $\chi^2(1) = 76.10, p < 0.001$. As Table 1 shows, victims of cyberbullying reported having fewer friends than those who were not cyberbullied, chi-square analysis found a significant association between being cyberbullied and reports of having fewer friends, $\chi^2(1) = 76.10, p < 0.001$.

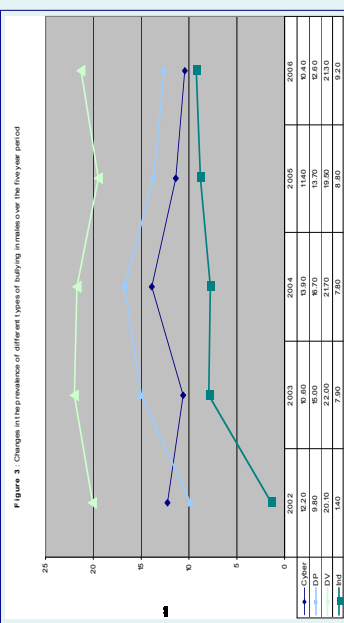
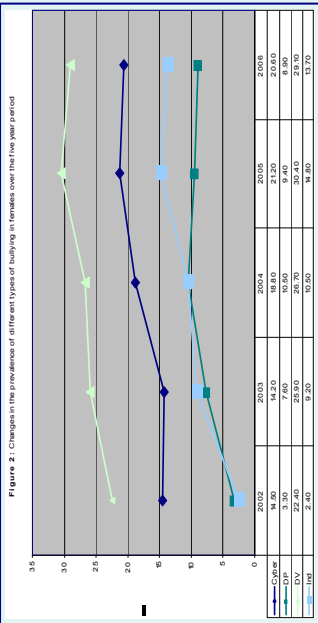
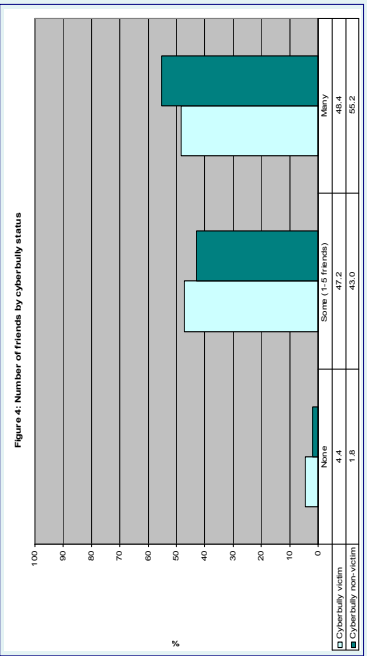
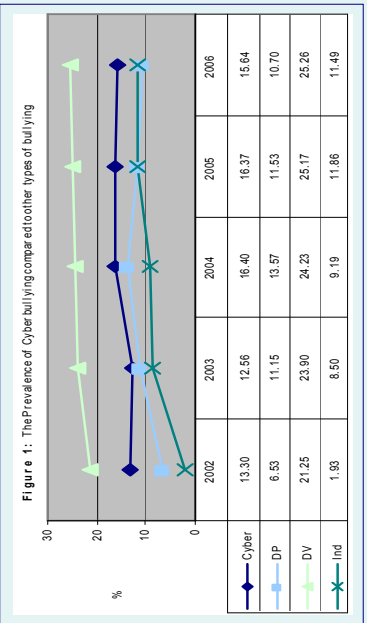


Table 1: Prevalence of feeling lonely in school by cyberbullying status

Frequency	Cyberbullying victim	Cyberbullying non-victim
Never	41.1	61.5
Sometimes	45.6	33.8
Always	13.3	4.7

Prevalence of feeling less liked than peers by cyberbullying status

Frequency	Cyberbullying victim	Cyberbullying non-victim
Never	20.2	34.1
Sometimes	52.1	50.1
Always	27.7	15.8

Discussion
The results of this study demonstrate that over the past 5 years the prevalence rates for cyberbullying have risen from 13.3% in 2002 to 15.64% in 2006. The rise in cyberbullying was particularly steep in females. Over the past 5 years cyberbullying has remained the second most prevalent form of bullying reported by pupils and that those who are a victim of cyberbullying are more likely to report having fewer friends, feel less liked than their peers and more frequently report feeling lonely in school. Results of this study have found a significant gender difference in reports of being cyberbullied, however this study focused on only cyberbullying committed by text message and email, future studies need to examine the difference in behaviours such as being bullied on online gaming sites, on social networking sites (such as MySpace) and through the creation of websites. Due to the fact that cyberbullying is now the second most prevalent form of bullying reported by young people, research now needs to focus on developing effective intervention strategies to tackle this problem.

Abstract

Cyberbullying has been defined as bullying which occurs through communication and media devices such as the mobile phone. To date the majority of research on cyberbullying has focused on identifying the prevalence of this behaviour and any age and gender differences that may exist. As part of a larger survey the aim of this study was to examine the nature of text messages reportedly received by victims of cyberbullying.

Text messaging as a form of bullying: An analysis of content

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Introduction

In recent years cyberbullying has been the focus of increased research and media attention. Research has identified that between 19% and 25% of adolescents report being cyberbullied (Ybarra & Mitchell, 2004; MSN, 2006; Rivers & Noret, 2007). Campbell (1995) defines cyberbullying as bullying which is committed using media and communication devices, and can include behaviours such as sending nasty or threatening text messages via mobile, creating insulting and critical websites about someone, sending threatening, insulting or nasty messages over the internet, through social networking sites such as BEBO or MySpace, or on instant messenger programmes such as MSN Messenger. Smith et al (2005) identify that bullying by phone call, text message and email are the most prevalent forms of cyberbullying. As yet however, the main focus of cyberbullying has been to examine the prevalence rate of this type of bullying behaviour. Little research has been conducted examining the nature of cyberbullying.

The aim of this study is to examine one aspect of cyberbullying, bullying by text message, to identify the nature of text messages being sent to Cyberbully, and to identify any gender differences in the nature of messages being sent.

Method

Design: This study draws upon the results of one aspect of a much larger five year cohort study employing a survey design, focusing in particular on the data collected in 2006.

Participants: In 2006, 3054 pupils from years 7 and 8 (aged 11 to 13 years old) participated in the study, from 11 schools in the same city. 50.2% of the sample were girls and 49.8% were boys.

Survey Tool: An adapted version of the Olweus bullying questionnaire was used (Olweus, 1991; Whitney & Smith, 1993). Of interest to this study was the question asking participants to provide examples of any nasty or threatening text messages they had received.

Procedure

The project was conducted with the co-operation of the Local Education Authority and each year data collection took place in the summer term. All participants completed a copy of the questionnaire in class time. The questionnaires were distributed and collected in by the teacher and then returned to the researchers for analysis.

Results

Overall, in 2006, 15.6% (n=465) of the sample reported being cyberbullied, with more girls (20.6%) reporting this than boys (10.4%).

A total of 164 participants responded to this question, 16 responses were not included in this analysis as they stated such things as 'do not want to say' and 'do not own a phone'. Therefore a total of 148 text messages were included in the analysis. Using content analysis, 12 categories were identified, examples of text messages from each category are given in Figure 1. Table 2 shows the prevalence of the different categories within the text messages (please note the percentages will exceed 100% as some messages fell into more than one category). The most prevalent category received by victims was name calling, this was particularly the case for girls. Other prevalent categories included threats of physical violence and death threats.

Figure 1: Examples of the different types of text messages

Category 1: Threats of Physical Violence
As the name suggests this category included comments which included threats of physical violence, such as;

I am going to beat you up after school tomorrow

26.8% of the messages received by girls compared to 25% of messages received by boys included a threat of physical violence

Category 2: Abusive/ Hate related Texts

17.6% of the messages included some element of verbal abuse, mainly swearing, and statements relating to hating the recipient;

I hate you, you fucking bitch and you're a slag

Slightly more boys than girls reported receiving such messages

Category 3: Name Calling

The most commonly observed theme in the text messages reported was some element such as;

Calling me fat and a midget

Overall, 34.5% of messages included some element of name calling, with more of the messages received by girls (41.1%) including this than those received by boys (33.9%)

Category 4: Death threats

Text messages incorporating death threats were more commonly reported by boys (25%) than girls (10.7%), overall 14.2% of the messages included a death threat, for example;

That I was going to get killed and my throat slit

Category 5: Friendship/ Relationships

One common theme relating to the text messages received by girls was relating to having received nasty or threatening text messages because of falling out with a friend;

I've only had them when I've fallen out and someone doesn't like me but they aren't threatening and we soon are friends again

None of the boys reported receiving such messages.

Category 6: Sexual acts

1.4% of the text messages reportedly included some form of sexual content;

Wat up 2 I want to fuck u!

Category 7: Demanding

6.1% of the text messages included some element of being told to do something or go somewhere;

Meet me somewhere

Category 8: Threats to Damage Relationships

3.4% of the text messages included a threat to damage a relationship;

I will tell him wat you sed if you don't dump him

This was reported by 3.6% of girls and 2.8% of boys

Category 9: Knowing where Recipient lives

Overall, 4.7% of the text messages included some comments on knowing where the recipient lived and often also included an element of threatening physical violence;

I know where you live and one day, I will come and you wont like it!!

Category 10: Family Related

Overall 3.4% of the text messages included a comment on the recipient's family;

I will get you and your family too

More boys reported this type of message (8.3%) than girls (1.8%)

Category 11: Chain Texts

Only one of the participants (a female) reported receiving a chain text;

Send this txt message to ten of your friends if you don't you will pay!

Category 12: Other

Overall, 3.4% of text messages could not be categorised into the items listed above, for example

I will eat your soul ha ha

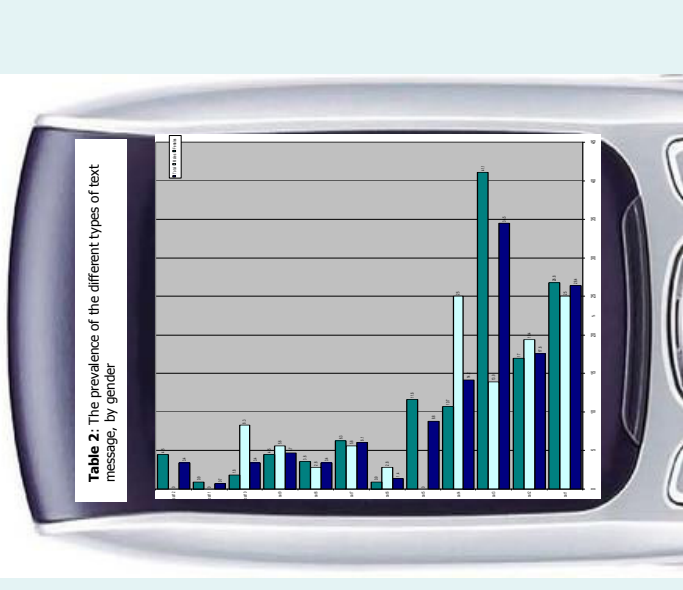


Table 2: The prevalence of the different types of text message, by gender

Discussion

The results of this study demonstrate the particularly nasty and threatening nature of the text messages young people are receiving when they are being cyberbullied. The most common form of text messages reported were those which included some element of name calling, this relates well to research into bullying as a whole which consistently finds direct verbal forms of bullying (such as name calling) to be the most prevalent form of bullying experienced (i.e. Noret & Rivers, 2007). Some interesting gender differences were also evident in the types of messages reportedly received, with more females reporting receiving messages including being called names and more males reportedly receiving more 'death threat' text messages. Contradictory to research into more traditional forms of bullying which has found more males reporting being threatened with physical violence than females (i.e. Glover et al, 2000), there was little difference in the percentage of males and females reporting receiving messages which threaten physical violence. One interesting category to emerge from the analysis was category 5, which was related to friendships and relationships. This category was only evident in text messages received by girls, and included messages which were sent in retaliation to a fall out between friends or as a result of a break-up in a romantic relationship. Future research into cyberbullying needs to focus on the nature of other forms of cyberbullying as well as investigating the relationship between sender and recipient further. Cyberbullying is now being included in more anti-bullying in schools, however awareness needs to be raised among both parents and teachers on the potential dangers and nasty and threatening nature of cyberbullying and it is important to advise young people not to respond to such messages, but to store them as evidence and report the incident in the same way as they would any other act of bullying.