

## Effects of traditional bullying and empathy on cyberbullying

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Will victims of bullying also become cyber bullies? Do cyber bullies lack empathic responsiveness? These questions have been discussed controversially (Ybarra & Mitchell, 2004). 2,070 students from Luxembourg secondary schools were tested with the German version of the Cyberbullying questionnaire (Smith et al., 2008) and a novel questionnaire on empathy. Findings support the thesis of a strong link between traditional bullying and cyberbullying. Furthermore, analyses of variance indicated that cyber bullies showed less empathic responsiveness. The implications of the findings are discussed in terms of their impact on interventions for cyberbullying.

### Introduction

Recently, cyberbullying has emerged as a new phenomenon resulting from the advancement of new communication technologies. In current definitions, it has been described as the deliberate and repeated harm inflicted through the use of computers, cell phones, and other electronic devices (Hinduja & Patchin, 2009), carried out as an aggressive act by a group or individual, against a victim who cannot easily defend him or herself (Smith et al., 2008).

In comparison with traditional bullying cyber bullies remain more anonymous. In addition, cyber bullies have a more unique sense of power and control and a stronger feeling of imperviousness to sanctions. Altogether, cyberbullying appears to be a more pervasive phenomenon, which may occur at any time and any place. With respect to the specific characteristics of current communication technologies there seems to be no place to hide for those becoming

victims of cyberbullying, whereas the perpetrators benefit from the breadth of the audience and the greater invisibility compared to traditional forms. Nevertheless, the question emerges whether or not cyberbullying is more or less only a covert form of psychological bullying (Smith et al., 2008).

Only few studies analyzed the relationship between traditional bullying and cyberbullying (Kowalski, Limber & Agatston, 2008), yielding mixed results. Some studies found that students' roles in traditional bullying predicted the same behaviour in cyberbullying, thus indicating that victims of traditional bullying are also targets of online attacks (Kowalski & Limber, 2007). In addition, bullied students proved to be also cyber bullies (Ybarra & Mitchell, 2004). However, there was no significant overlap between traditional bullying and cyberbullying in other studies (Raskauskas & Stoltz, 2007).

Aggressive behaviour was found to be related to adolescents' level of empathy. Empathy is defined as sharing another person's emotional state. Different approaches describe empathic responsiveness as reflecting a multidimensional construct with cognitive and affective components (Davis, 1994). A meta-analysis confirmed the negative correlation between antisocial behaviour and empathy. High levels of both cognitive and affective components of empathy mitigate aggressive behaviour and violence (Jolliffe & Farrington, 2004).

To date, the few studies that addressed the empathic responsiveness of traditional bullies reported a weak negative correlation between empathy and involvement in bullying others, particularly for boys (Gini et al., 2007). As mentioned earlier, cyber bullies remain more anonymous as traditional face-to-face bullies. This anonymity, or distance, between the perpetrator and the victim implies that perpetrators will be prevented from observing the immediate consequences of their behaviour. Hence, cyber bullies may experience less empathy for their victims than traditional bullies. However, first research findings do not support this role of empathy for cyberbullying. Cyber bullies were not found to show a lack of empathy in comparison to victims, bully-victims, and non-involved. Apparently, cognitive and affective empathy do not seem to be relevant processes in cyberbullying (Almeida et al., 2008).

The first aim of the study was therefore to examine the relationship between traditional bullying and cyberbullying. Particularly, the hypothesis was tested that bullied students (victims), in order to take revenge, also engage more often in cyberbullying, thus becoming the perpetrator. The second aim of the present study was to analyse the role of empathy in relation to cyberbullying. In particular, the hypothesis was tested that cyber bullies show less empathy than non-cyber bullies.

## Methods

### Participants

The sample consisted of 2,070 students. A total of 941 (45.5 %) boys and 1,127 (54.5 %) girls from Luxembourg secondary schools participated in the online-study (2 missing values), who attended 7<sup>th</sup> to 13<sup>th</sup> grade classes (56.9 % from 7<sup>th</sup> to 9<sup>th</sup> grades). 22 out of the 30 secondary schools in Luxembourg participated. The mean age of the sample was 15.9 years (SD = 2.5; range: 12 - 24). Participants received school permission to participate before the collection of data in classroom. Only few participants (1.1 %) were excluded from analyses because of missing data.

### Measures

**Cyberbullying questionnaire.** A modified German short version of the cyberbullying questionnaire (4 items) was used (Smith et al., 2008). Each item used a 6-point ordinal scale (almost daily, several times a week, about once a week, about once in a month, 1-3 times a year, never). Students indicated how often they had become victim or perpetrator of traditional bullying, or cyberbullying, in the current school year (the study was conducted at the end of the school year).

**Empathy scale.** A novel scale was used. Empathy as a trait was measured with 4 items. Students indicated their agreement to statements on a 5-point Likert scale ("fully agree" to "totally disagree", Cronbach's  $\alpha = .71$ ;  $r_n$  range .45 to .58).

**Demographic questionnaire.** To test for demographic patterns of involvement in cyber-bullying, students recorded their gender, age, and overall years in school.

## Results

### Relationship of traditional bullying and cyberbullying

Findings support the hypotheses of (a) a link between traditional bullying and cyber-bullying, (b) that bullies tend to be cyber bullies, and (c) that victims of bullying also tend to become victims of cyberbullying (see table 1).

The present findings also support the Ybarra and Mitchell hypothesis. Traditional victims tend to be cyber bullies ( $\chi^2 = 51.67$ ;  $p < .001$ ): 16.6 % of victims of traditional bullying are also cyber bullies, whereas the same was true for only 8.2 % of those students that had not become victims of traditional bullying.

Table 1: Contingencies between traditional bullying and cyberbullying

Traditional Bullying	Non-Cyber victim	Victim of Cyber Bullying	$\chi^2$	$p$
Non-Victim	1365	98	228.85	< .0001
Victim of Bullying	411	195		
	Non-Cyber bully	Cyber bully		
Non-Bully	1369	53	314.19	< .0001
Bully	476	186		
	Non-Cyber bully	Cyber bully		
Non-Victim	1341	119	31.67	< .001
Victim of Bullying	505	100		

Table 2: Mean differences of cyber bullies and victims of cyberbullying in empathy

Dependent Variable	non-cyber bullies mean (SD)	cyber bullies mean (SD)	F	p
Lack of empathy	2.39 (0.97)	2.78 (0.98)	31.97	< .001
	non-victim of cyber bullying	victim of cyber bullying		
Lack of empathy	2.44 (1.00)	2.40 (0.89)	0.01	n.s.

### Traditional bullying, cyberbullying, and empathy

Traditional bullies show a greater lack of empathy than non-bullies ( $F_{(1, 2069)} = 20.17$ ;  $p < .001$ ), but no differences were found between victims and not victims of bullying. In contrast to other findings (Gini et al., 2007), boys as well as girls bullying behaviour was significantly associated with lower levels of empathic responsiveness (see table 2 for group means).

Interestingly, a similar pattern of results was observed for cyber-bullying. Cyber bullies also show a greater lack of empathy for others being victimized than do non-cyber bullies ( $F_{(1, 2069)} = 31.97$ ;  $p < .001$ ). Again, no differences were found between victims and non-victims of cyber bullying. In contrast to traditional bullying, boys and girls did not differ.

## Conclusions

In line with other findings, it was found that bullies tend to be

cyber bullies, and that victims of bullying also tend to be victims of cyber bullying. In addition, the Ybarra and Mitchell hypothesis was also confirmed. Traditional victims tend to be cyber bullies. It was found that, compared to non-cyber bullies, cyber bullies show less empathy for others being victimized. These findings are in accordance with studies showing a negative relationship between empathy and aggression (Miller & Eisenberg, 1988).

However, some limitations have to be considered. For example, data were collected online, so generalization of findings may be limited. Furthermore, only a global measure for empathy was used and affective as well as cognitive empathy may have provided a unique contribution to this relationship. Thus, future research is needed to replicate the current findings by separately assessing the two aspects of empathy.

There are important implications of these findings for intervention. Results have to be considered in the design and development of new anti-bullying trainings. If a majority of cyber bullies is known also to be traditional bullies, who are therefore relatively easy to identify and to reach for intervention programs, interventions that prove to be effective for traditional bullies might also be applicable for cyber bullies. Thus, the findings also confirm the importance of implementing empathy training in anti-cyberbullying programs. More specifically, skills training for adolescents should also include specific components to train empathic responsiveness in the context of media use.

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