Discrepant gender patterns for cyberbullying and traditional bullying – An analysis of Swedish adolescent data

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ABSTRACT

In the wake of the rapid development of modern IT technology, cyberspace bullying has emerged among adolescents. The aim of the present study was to examine gender differences among adolescents involved in traditional bullying and cyberbullying. Cross-sectional data from 2989 Swedish students aged 13–15 were analyzed using logistic regression analysis. The results show discrepant gender patterns of involvement in traditional bullying and cyberbullying. First, although there were only minimal gender differences among traditional victims, girls are more likely than boys to be cybervictims when occasional cyberbullying is used as a cut-off point. Second, whereas boys are more likely to be traditional bullies, girls are as likely as boys to be cyberbullies. In conclusion, compared to traditional bullying, girls are generally more involved in cyberbullying relative to boys. We discuss these results in the light of adolescents' usage of computerized devices.

1. Introduction

As a consequence of the global IT revolution, the use of and access to electronic devices for communication have become part of everyday life for most people. In Sweden, a country highly influenced by modern IT technology, almost all adolescents have access to the internet via mobile phones or computers (The Swedish Media Council., 2010). Following the rapid development of IT technology, the phenomenon of bullying in cyberspace has emerged among adolescents. The estimated prevalence rates for cyberbullying, as for traditional bullying, vary between countries (Beran & Li, 2007; Craig et al., 2009; Li, 2006; Molcho et al., 2009; Pornari & Wood, 2010; Raskauskas & Stoltz, 2007; Wang, Nansel, & Iannotti, 2010). Although children and adolescents in Sweden report relatively low rates of cyberbullying compared to other countries (Beckman, Hagquist, & Hellström, 2012), it is still considered an important public health issue.

1.1. Gender differences

Viewing Swedish adolescents' internet habits and usage from a gender perspective, some obvious differences have been reported. For example, boys in Sweden (aged 9–16) play more games and watch more video clips on the internet, whereas girls are more active on social networking sites (apart from Facebook), chatting and blogging (The Swedish Media Council, 2010), and they use more

sites where they can upload pictures for public display (Findahl, 2010). Instant messaging (MSN) is used by 85% of 11-year-old girls compared to 50% of the boys of the same age. Blogging is also more widely used by girls: about twice as many girls as boys blog and almost 70% read blogs, compared to 50% of boys (Findahl, 2010). International research has shown similar gender differences (Lucas & Sherry, 2004; Muscanell & Guadagno, 2012; Pujazon-Zazik & Park, 2010).

Gender patterns in traditional bullying have been evident over time. Boys are more likely than girls to engage in bullying, particularly direct physical bullying (Björkqvist, Lagerspetz, & Kaukiainen, 1992; Crick et al., 2001; Wang, Iannotti, & Nansel, 2009) as bullies or as *bully/victims* (i.e. individuals who are both a bully and a victim) (Perren, Dooley, Shaw, & Cross, 2010; Solberg, Olweus, & Endresen, 2007). In some studies, more boys than girls are victims of traditional bullying (Olweus, 1993; Solberg & Olweus, 2003). However, many do not report any gender differences (e.g., Perren et al., 2010; Ranta, Kaltiala-Heino, Pelkonen, & Marttunen, 2009; Solberg et al., 2007). Verbal bullying, on the other hand, seems to be just as common for boys as for girls, but girls more frequently engage in indirect, covert, relational bullying than boys do (Björkqvist et al., 1992; Crick et al., 2001).

In contrast to research on traditional bullying, cyberbullying research shows inconsistent results regarding gender differences. For example, studies from the UK (Smith et al., 2008), the US (Wang et al., 2009) and Canada (Li, 2007) reported boys being overrepresented as cyberbullies. Another study from the UK showed no such gender differences (Smith et al., 2008). In the US, Kowalski and Limber (2007) and Wang et al. (2009) reported girls as more likely

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to be cybervictims. A study from Spain (Calvete, Orue, Estévez, Villardón, & Padilla, 2010) reported that girls are more often cybervictims and boys are more often cyberbullies. However, many studies do not report any particular gender differences either for cyberbullies or for cybervictims (e.g. Mishna, Cook, Gadalla, Daciuk, & Solomon, 2010; Patchin & Hinduja, 2006; Slonje & Smith, 2008; Smith et al., 2008). To our knowledge, only two studies in Sweden have yet examined adolescents' involvement in cyberbullying (Slonje & Smith, 2008; Slonje, Smith, & Frisén, 2012), and their result showed no significant gender differences, either for victims or bullies.

While the difference between direct and indirect bullying is rather distinct in traditional bullying, it is not clear-cut in cyberbullying research. Cyberbullying is itself sometimes generalized as a form of indirect bullying (Kowalski & Limber, 2007) or as a tool for social exclusion (Spears, Slee, Owens, & Johnson, 2009), but more sophisticated descriptions have also been outlined (Kowalski, Limber, & Agatston, 2008; Mason, 2008; Vandebosch & Van Cleemput, 2009).

Although cyberbullying is increasingly recognized, there are still unanswered questions concerning gender differences in cyberbullying and traditional bullying, especially regarding simultaneous analyses of mutually exclusive groups (victims, bullies and bully/victims) and types of bullying involvement (traditional bullying and cyberbullying). Including mutually exclusive groups in the analysis allows us to assess the real effect of different kinds of bullying involvement. This knowledge may help in the planning of preventive work and thus enhance students' mental health in a wider perspective. Therefore, the current study will examine gender differences among adolescents involved in traditional bullying and cyberbullying using mutually exclusive bullying groups.

1.2. Definitions of traditional bullying and cyberbullying

Bullying is conceptually part of the broader umbrella concept of peer victimization, which can include physical and verbal aggressive acts, exclusion from social activities, and threats of harm (Hawker & Boulton, 2000). Bullying is a narrower phenomenon, usually defined according to three criteria, namely, it is *repeated, negative intentional actions* arising from *an imbalance in power and/or strength* that can be social, physical or psychological (Olweus, 1993). In contrast to traditional bullying, cyberbullying definitions are less consistent (Kiriakidis & Kavoura, 2010; Tokunaga, 2010), but most are based on Olweus' (1993, 1996a) criteria (e.g. Smith et al., 2008). There is, however, an ongoing debate concerning the distinctive features of the two forms of bullying (Kiriakidis & Kavoura, 2010; Tokunaga, 2010) and it has been called into question whether the criteria for traditional bullying really apply to cyberbullying. For example, power imbalance is questioned because of the perpetrator's opportunity to be at least virtually anonymous, for example when using someone else's computer or e-mail account (Dooley, Pyżalski, & Cross, 2009; Hinduja & Patchin, 2008). While the repetition criterion is one of the aspects distinguishing bullying from aggressive behavior (Olweus, 1993), the operationalization of pervasiveness in cyberbullying may be more in terms of the impact, irrespective of repetition (Dooley et al., 2009). Bullies and victims can perceive the number of incidents differently and, although it might be an easy task to count the number of sent text messages, it is almost impossible to count visitor clicks on a web page containing a humiliating photo (Slonje & Smith, 2008). Furthermore, a single cyber incident can spread rapidly via the internet, both in and outside the school (Kiriakidis & Kavoura, 2010), and may be harder to escape from, since the victimization can take place even in the victim's home (Slonje & Smith, 2008). It has been argued that these aspects make cyberbullying a more severe phenomenon than traditional bullying (Dooley et al., 2009; Wang, Iannotti, Luk, & Nansel, 2010).

1.3. Socio-demographics

It has been discussed in the literature whether socio-demographic factors such as family structure and ethnicity are associated with both being a bully and being victimized. For example, Nordhagen, Nielsen, Stigum, and Köhler (2005) reported an increased risk of being victimized, and Spriggs, Iannotti, Nansel, and Haynie (2007) found an increased risk of being a bully, among children and adolescents living in single-parent families. Graham and Juvonen (2001) discuss ethnicity in a school context, in terms of majority–minority status that could affect the balance of power and enhance perceptions of 'us' versus 'them'. Carlerby, Viitasara, Knutsson, and Gillander Gådin (2012) also found Swedish adolescents with a foreign background to be more involved in bullying. Therefore, it is important to control for such factors.

1.4. What we know and where research is lacking

Reviewing previous researchers' methodology, there are many studies comparing traditional bullying and cyberbullying, but only a few studies report a clearly described procedure that distinguishes between bullies, victims and bully/victims and at the same time between traditional bullying and cyberbullying, which is critical to the assessment of the real effect of different kinds of bullying involvement. We found three studies making such distinctions that also examined gender differences between these groups (Gradinger, Strohmeier, & Spiel, 2009; Gradinger, Strohmeier, & Spiel, 2011; O'Moore, 2012). Gradinger et al. (2009, 2011) acknowledged the methodological issue with mixed groups and also studied *combined* groups, i.e. when bullies, victims and bully/victims engage in, or are exposed to, both traditional bullying and cyberbullying. In line with previous studies, O'Moore (2012) found boys to be more involved as bullies and bully/victims in traditional bullying, whereas there was no gender difference among traditional victims. Regarding cyberbullying, a larger proportion of girls reported being cybervictims and cyberbully/victims, but there was no gender difference in cyberbullying others. However, O'Moore only reported percentages and did not perform any statistical analysis. Similarly, Gradinger et al. (2011) reported boys to be more involved in physical bullying, both as victims and as bullies; girls were more involved as cybervictims (and victims of verbal bullying and social exclusion), but there were no gender differences in cyberbullying others. In contrast, Gradinger et al. (2009) reported boys outnumbering girls in cyberbullying others, but found no differences in cyber-victimization, and no difference in traditional bullying or victimization. In both studies by Gradinger et al. (2009, 2011), gender analyses on bully/victims are lacking due to a paucity of observations. In conclusion, while some studies have used mutually exclusive groups and types in their analysis, there is still a lack of statistical analysis of gender differences for bully/victims that controls for possible confounders such as family structure and country of birth.

Existing knowledge of gender differences in the use of social media sites does not clarify whether the comprehensive changes in use and availability of computerized technology have affected online bullying patterns as well. The scope of the internet is no different for boys than girls, and existing socialization processes may not play the same role in this context. According to Österman et al. (1998), it is important to distinguish between styles of aggression because, if they are neglected, gender-specific variations will go unnoticed. Therefore, the overall aim of the present study is to examine gender differences among adolescents involved in