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# Cyberbullying among German and Dutch adolescents-

research on siblings' influence and factors relevant for prevention and intervention

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#### Abstract

Cyberbullying has to be considered a substantial risk for schools, with far-reaching consequences on both the individual and social level. Based on this, the goals of the present study were threefold. First, factors that were considered potentially relevant and useful for pre- and interventions against cyberbullying were assessed. Second, the role siblings play in this context was examined in order to find out whether they have a protective function or are rather risk factors. Third, a comparison between the sample of German and Dutch participants was made in order to gain more insight into the international differences in the cyberbullying context. By means of an online survey, data of 386 ninth graders from two schools in Germany and the Netherlands, respectively, were obtained. Analysis yielded that the majority of the chosen factors was of importance in the cyberbullying context and that there are international differences regarding cyberbullying and victimization. Although noteworthy outcomes in terms of siblings' influence were obtained, the number is still too small to draw a general conclusion concerning their role. In addition, a larger sample size is required to enhance the validity of the results. Suggestions for practical implications of the outcomes for prevention and intervention are included.

#### Samenvatting

Cyberpesten is een substantieel risico voor scholen omdat de consequenties op zowel individueel als sociaal niveau ingrijpend zijn. Om die reden waren er drie hoofddoelen in de voorliggende studie. Ten eerste werd onderzoek gedaan naar factoren die potentieel relevant en nuttig geacht kunnen worden in het kader van pre- en interventie. Het tweede doel was te bepalen of broers en zussen een beschermende functie hebben of eerder risicofactoren zijn in verband met cyberpesten. Ten derde werd er een vergelijking gedaan tussen de Duitse en Nederlandse deelnemers om meer inzicht te krijgen in de internationale verschillen in het kader van cyberpesten. Door middel van een online enquête werd de data van 386 leerlingen der derde klassen van twee Duitse en twee Nederlandse scholen verzameld. Op basis van de analyse kon worden geconcludeerd dat de meerderheid van de gekozen factoren inderdaad van belang was en dat er verschillen zijn tussen Duitse en Nederlandse leerlingen wat betreft cyberpesten en victimizatie. Er werden ook opmerkelijke uitkomsten gevonden met betrekking tot de invloed van broers en zussen. Het aantal uitkomsten is echter nog te klein om algemene conclusies over hun rol te kunnen trekken. Bovendien is een grotere steekproefgrotte nodig om de validiteit van de uitkomsten te verhogen. Practische implicaties voor de uitkomsten in verband met preventie en interventie worden voorgesteld.

### Introduction

Cyberbullying has to be considered a substantial risk for schools. This holds true on the individual level, where it affects school children in their emotional, social, and academic life, and has psychological and psychosomatic consequences. In addition, its negative influence can also be observed on a wider scope, affecting school life in general by impairing it as a social and learning environment and by being a factor that relates to delinquent and violent behavior such as school shootings. Therefore, the goal of the present study is to assess factors that are assumed to influence school children's involvement in cyberbullying. First, factors that are considered to play an influential role in terms of behavior and effective processing of educational information against cyberbullying will be assessed. Second, the role of siblings (i.e. the quality of the relationships, the number of siblings, and birth order) as risk or protective factors will be examined in the context of cyberbullying. This is the main contribution of this study since there is currently a lack of research regarding siblings' influence on involvement in cyberbullying. Third, based on the collected data, an international comparison between the Dutch and the German participants will be conducted. Eventually, inferences will be drawn from the outcomes of the three described focus areas of this study with respect to preventive and intervening approaches against cyberbullying.

In the following, the theoretical background will be elaborated on, which is based on existing literature on offline and online bullying. To begin with, fundamental aspects regarding (cyber)bullying will be addressed, including definitions and sub-classifications, statistical information, parallels between online and offline bullying, as well as potential consequences. After that, the involved parties, i.e. victims, cyberbullies, and bystanders will be described. The subsequent section addresses issues concerning both factors that are considered to be of importance for risk communication and behavior change, and approaches to prevention and intervention, which is followed by the first part of the hypotheses and the first research question. After that, literature on sibling relationships will be elaborated on and related to (cyber)bullying, which is followed by the second part of hypotheses, including the second research question.

### What is cyberbullying?

Within the scope of research on the relatively new phenomenon of cyberbullying, several definitions can be found. The term has originally been coined by the Canadian Bill Belsey who describes it on his website as "the use of information and communication technologies to support deliberate, repeated, and hostile behaviour by an individual or group, that is intended to harm others" (*http://www.cyberbullying.ca*). While other researchers also put the emphasis on the intentional and repeated manner and the use of electronic means by which this type of bullying is conducted (Hinduja & Patchin, 2009), Peterson (2001), doing research on traditional bullying, adds the lack of provocation on the part of the victim. The intention of the cyberbully can be outlined as humiliating the victim in public, the more so, since the internet provides a larger audience than the number of spectators present in the schoolyard.

Cyberbullying has been partly accounted for by a notion that can be labeled *online disinhibition*. Herring (2001) describes the consequences of the anonymity, which is distinctive of cyberspace and can be for other devices like text messages, as promoting feelings of disinhibition in the way that it both reduces social liability and facilitates the performance of hostile behavior. Thus, feeling able to act anonymously can have a liberating effect on the bully.

Willard (2005) has defined subcategories of cyberbullying. With regards to content, she identified the most common actions as *flaming* (sending angry, rude, vulgar messages about a person to an online group or to that person via email or other text messaging), *online harassment* (repeatedly sending offensive messages via email or other text messaging to a person), *cyberstalking* (online harassment that includes threats of harm or is excessively intimidating), *denigration* (sending harmful, untrue, or cruel statements about a person to other people or posting such material online), *masquerade* (pretending to be someone else and sending or posting material that makes that person look bad), *outing* (sending or posting material about a person that contains sensitive, private, or embarrassing information, including forwarding private messages or images), and *exclusion* (cruelly excluding someone from an online group). In terms of the technologies used to bully electronically, Smith, Mahdavi, Carvalho, & Tippett (2006) found that text messages, picture/video clips, phone calls, emails, chat rooms, instant messaging, and websites were popular bullying modes. These findings further indicate that bullying via the mobile phone, i.e. phone calls and text messages, as well as sending emails were most common,

while chat room bullying was used least frequently. This is for the most part in accordance with the results of studies conducted in both the United Kingdom and Australia, which also list texting and emailing among the "Top 3". However, chat room bullying was found to be the second most common method (Campbell & Gardner, 2005; National Children's Home [NCH], 2005). In their study, Smith and colleagues (2006) made an essential point by concluding that all these forms of cyberbullying were, to a certain degree, existent both inside and outside of the school environment. According to the reports of the school children in their sample, cyberbullying behavior usually comes from school children that are in the same class or year group as the victim. This is a finding that supports the suggestion that a certain amount of online bullying originates from conflicts that started in school (Wolak, Mitchell, & Finkelhor, 2006). This problem has also been addressed by both school officials (Beckerman & Nocero, 2003) and experts who point out that "cyberbullying has become an increasingly significant problem in schools and it deserves our serious consideration" (Li, 2007, p.446).

In conclusion, the most characteristic features of cyberbullying can be described as the deliberate and repeated behavior that is aimed at harming others and conducted by means of electronic communication technologies. Online disinhibition explains a facet of this new way of bullying. Furthermore, cyberbulling has been subclassified based on both content and electronic means used by the bullies. The assumption that cyberbullying can considerably affect school life has been widely agreed upon.

#### **Statistics and prevalence**

In their literature review, Schrock and Boyd (2008) indicate that cyberbullying has to be taken seriously as it is a widespread problem among minors, ranging from 4% up to 46% of youth who have had experiences with online bullying, which has not been further specified due to various conceptualizations of cyberbullying in the studies included. This potentially high number of involved young people can partly be accounted for by merely looking at the role that the internet recently plays in adolescents' lives. Oblinger and Oblinger (2005) outline those born from 1980 onwards as the "Net Generation" (p.1.2) since they have been characterized as being online all the time and as embracing the electronic socialization and interactive communications as inherent. Other findings support this view. A 2005 Canadian report shows that at that point already 94% of young people used the internet from home and even described school children from elementary school as depending on the internet to keep in touch with their friends (Media

Awareness Network, 2005). In Germany, 96% of the 12 to 19-year-olds had home access to the internet in 2008 (Medienpaedagogischer Forschungsverbund Suedwest, 2008). Half of them used the internet in their bedroom, thus most probably without parental supervision. Social communication has been found to be the main purpose of being online, with 73% using instant messenger, 53% visiting online-communities, 49% reading and writing emails and 29% spending time in chat rooms several times per week. An annual study conducted in the Netherlands shows similar results and an upward tendency since 2006, with almost 100% of all 13 to 14-year-olds being able to access the internet from home in 2008 (Van Rooij, Meerkerk, Schoenmakers, Van den Eijnden, & Van de Mheen, 2008). While functions such as instant messengers or emails were rated to be popular, social network communities enjoyed the greatest popularity, with 70% of the adolescents visiting them at least once per week. Thus, solely being able to constantly access the internet as well as the popularity of online interactions among adolescents increase the general likelihood of experiencing bullying at least once while online.

Various research findings support this assumption. From the previously mentioned study by Smith and colleagues (2006), it has been inferred that more than 20% of school children aged 11 to 16 have been targets of cyberbullying at least once and that almost 7% reported being bullied online more frequently over the previous couple of months. Li (2007), who conducted a comparison study between schools in China and Canada and worked with a significantly larger sample than Smith and colleagues (2006), even proposed that almost one third of the 7<sup>th</sup> graders were victims, with 40% having been harassed more than four times. Approximately one pupil out of five was a cyberbully. More than 60% of these school children reported having harassed others four or more times. Moreover, a remarkable insight based on Li's study is that more than half of the school children claimed to know someone who had been bullied online. Unfortunately, it has not been specified whether they actually knew the victim or just witnessed a random person being cyberbullied, which may be relevant in terms of the likelihood to help the victim subsequently. The role of the bystander will be addressed at a later point in more detail. The additional literature reviewed for the present study contains data ranging from 7-20% of school children being bullied or threatened online and from 11-15% of those who identified themselves as cyberbullies (Ybarra & Mitchell, 2004a; Campbell & Gardner, 2005; NCH, 2005). The small to moderate differences in terms of these results can be accounted for by the definitions used in the studies, the methods for data collection or the assumed time frame, to name a few (cf. Schrock & Boyd, 2008).

Considering the aims of the present study, it seems especially interesting to have a closer look at research conducted in Germany and the Netherlands. The more so, since it has been found that culture and country play important roles in the bullying context (Nabuzoka, 2003; Li, 2007, Campbell, Butler & Kift, 2008). A 2007 online-survey, which claims to be one of the rather extensive studies of its kind in Germany encompassing close to 2000 school children from grade 1 to 13, indicates that one out of five school children has been affected by cyberbullying (Jäger, Fischer, & Riebel, 2007). Even though the authors remark that due to the used methods of recruitment and data gathering the sample does not represent the population of German school children, it offers a number of noteworthy findings concerning cyberbullying. Incidents of cyberbullying have been found to increase with grade, having its peak in grades 8 to 13. This contrasts with findings by Smith and colleagues (2006) who did not find any significant differences relating simply to age. However, it has been suggested that the observed increase may be accounted for by increased ownership of communication devices with older age, which finds support elsewhere (Giles, 2003). Beyond this aspect, participants of the German study reported that insulting the victim and spreading rumors were the most common actions, while instant messaging appears to be the most common means to bully online. Moreover, fellow school children were identified as principal offenders in this context. In the Netherlands, a large-scale study took place in 2006 in which 600 school children were asked to fill in questionnaires (Remers, Veuleers, & Swager, 2006). The majority of the school children attended the senior classes of schools with the Dutch standards vwo and havo. The findings are in accordance with the international tendencies, with 20% being the target of online bullies, about 10% that bullied digitally at least once, and more than one third that reports to have witnessed at least one incident of cyberbullying. Insults and verbal attacks via instant messenger devices were named as the most common forms. Even though this study was conducted almost four years ago, it seems appropriate to assume that the trends are still relevant today, especially when compared with the outcomes of more recent studies. A general notion that has to be considered when making inferences from the available data so far comes from Campbell, Butler and Kift (2008) who state that "[t]he incidence of cyberbullying is difficult to determine at this time, as there is scant published research in this area and the existing research seems to vary, from country to country and also at different points of time." (p.22)

To sum up, the above-mentioned findings imply that a significant amount of adolescents has had experiences with cyberbullying, be it as victims, as bullies, or as bystanders.

#### Parallels with traditional bullying

Referring to fairly recent study findings that suggest significant parallels between traditional and cyberbullying (Li, 2007; Ybarra, Diener-West, & Leaf, 2007; Beran & Li, 2007, Hinduja & Patchin, 2009), it seems appropriate to take into consideration that some aspects from the well studied field of traditional bullying may be applicable to the relatively new phenomenon of cyberbullying.

First, the relation between these two forms of bullying has been demonstrated in various studies, in the way that involvement in face-to-face bullying at school strongly predicts involvement in online harassment (Beran & Li, 2005, Hinduja & Patchin, 2007; Ybarra, Diener-West, & Leaf, 2007). In this context, Li (2007) considers that school bullies who have trouble harassing their victims in person, may transfer their bullying activities into cyberspace. Beran and Li (2005) even proposed that a lack of awareness and repercussions of cyberbullying may influence the quality of a bully's behavior at school, in the sense that it "may become more severe and directly, rather than indirectly, exerted against a victim." (p. 271). Second, it has been found that most bystanders and victims report neither incidents of traditional bullying nor those of cyberbullying (Hoover & Olsen, 2001; Li, 2007). Third, even though not fully explored yet, it has been assumed that online bullying entails consequences similar to those of traditional bullying (Campbell, Butler, & Kift, 2008). As Hawker and Boulton (2000) point out, distress descending from online and offline bullying victimization can have similar negative effects such as depression, anxiety, and feeling bad about oneself in the social context. The following section will provide a more detailed look at the possible consequences. Fourth, in terms of gender, overlap exists as well. For example, based on research on traditional bullying indicating that males bully more often than females (Hoover & Olsen, 2001), Li (2007) found the same tendency for cyberbullying. Regarding victimization, neither Smith and Shu (2000) nor Li (2007) could attest a significant difference for gender in terms of traditional or cyberbullying, while a different study provides evidence that females had a significantly greater chance to become victims regarding both forms of bullying (Smith et al, 2006). However, considering the literature review by Schrock and Boyd (2008) as well as the study by Campbell, Butler and Kift (2008), current results about gender differences regarding cyberbullying do not provide a reliable basis for general inferences in this context, as the researchers describe them as rather "inconclusive" and "conflicting". If anything, the former researchers report a greater probability of females becoming victims of online bullies, as well.

In conclusion, it can be proceeded on the assumption that offline and online bullying are strongly associated, in the way that there are significant similarities among bullies of both forms of bullying, which holds true for the victims. Moreover, neither incidents of face-to-face nor those of cyberbullying are likely to be reported by victims or bystanders and the consequences are assumed to be similar. Finally, to a certain extent, gender seems to play a role, even though the findings are not conclusive on the part of cyberbullying.

# Consequences

Aside from the notable parallels described in the previous section, there are some characteristics distinct to cyberbullying that suggest more negative long-term consequences than those elicited through traditional bullying. It has been assumed by Reid, Monsen, and Rivers (2004) that verbal and psychological harassment, a concept central and inherent to cyberbullying, may affect victims stronger than physical offenses, which outline a rather essential part of schoolyard bullying (Olweus, 2003, DiGuilio, 2001; Slee & Rigby, 1993). In addition, factors such as the anonymity in cyberspace, the enduring power of the written word and the lack of physical bounds for digital bullying may enhance the (perceived) negative consequences for the victim (Campbell, 2005). Anonymity fosters the effects of cyberbullying in two ways. First, cyberbullies do not have to face their victims and can hide their identity, which may encourage them to exert and maintain antisocial behavior due to feelings of detachment and a lack of feelings of guilt. Second, the victims may feel even more threatened when harassed by an unknown person since this situation is hardly predictable. There is evidence that this lack of knowledge concerning the sender, or in other words *uncertainty*, may go along with enhanced levels of anxiety (cf. Kelly, 1963; Afifi & Weiner, 2006). While the majority of the exact wording used by the bully to assault the victim in class or in the schoolyard may eventually be forgotten, insults and threats captured in text messages, emails or chat rooms are likely to endure longer. Cyberbullying, in contrast to traditional bullying, is not limited to the school environment, but can take place everywhere and at any time, even at home, so that the victim can never feel completely safe. Moreover, cyberbullying is not limited to a particular audience, say classmates, either, but can be followed by a number of spectators that is almost impossible to estimate.

However, as already mentioned in the previous section, the consequences can generally be expected to be very similar in how they affect the adolescent's psychological, emotional and academic life. Beran and Li (2005) associate symptoms of emotional depression as well as declines in academic achievement with being a victim of online bullying, while traditional bullying also seems to correlate with higher levels of depression, anxiety, and psychosomatic problems (Kaltiala-Heino, Rimpela, Rantanen, & Rimpela, 2000). The majority of those being attacked by bullies reported to experience negative emotions like feeling upset, afraid, embarrassed, irritated or just incapable of stopping to think about the harassment, as well as having feelings of frustration and sadness (Wolak, Mitchell & Finkelhor, 2006; Patchin & Hinduja, 2006). Trying to cope with these emotions has often been found to result in maladaptive behavior among adolescents such as interpersonal violence or delinquent behavior (Borg, 1998; Ericson, 2001; Rigby, 2003; Roland, 2002; Seals & Young, 2003). This seems to hold true for cyberbullying, considering that those adolescents who are victims in cyberspace report to conduct real-world problematic behavior, including alcohol and drug use or behaving aggressively towards other people and property (Hinduja & Patchin, 2007). Academic problems have been pointed out in studies relating to traditional bullying, as well, in that researchers could associate it with having trouble to concentrate, lower academic performance, less interest in school and increased truancy (Rigby, 1997; Zubrick et al., 1997, National Association of State Boards of Education, 2003). It has been estimated that one out of ten school dropouts guits school due to the fear of being assaulted (Greenbaum, Turner, & Stephens, 1988).

The impact on school life can be even more severe and far-reaching, since being bullied outside of school seems to increase the likelihood fourfold that the victim brings a weapon to school (Nansel, Overpeck, Haynie, Ruan, & Scheidt, 2003). The finding that bullying plays a role in many incidents of school shootings has also been supported elsewhere (Harpold & Band, 1998; National School Safety Center, 1999).

Taking all these findings into consideration, it has to be emphasized that they may not be understood them as causal but as correlational relationships, in the sense that it has not been determined yet which factors are the causes and which ones the effects.

#### Victims, cyberbullies, and bystanders

Regarding adolescent *victims* of school-related cyberbullying, Schrock and Boyd (2008) concluded that *victimization rates* were generally higher at age 14 to 15 compared to incidents in

early adolescence, peaking around age 15. This is problematic since adolescence is considered as the period when the own identity is constructed and still very prone to (negative) influences from the social environment (Giles, 2003). Fortunately, due to its adaptive state through still emerging biological and psychological developments and structures, this period seems well suited for prevention and intervention (Holmbeck et al., 2000; Toth & Cicchetti, 1999; Weisz, 1997). However, a central problem that has to be addressed relating to those victims, is that a substantial number of victims does not talk about being bullied, ranging from about 30% to 40% who did not tell anyone (Smith et al., 2006; Smith et al., 2008). More than 50% did not tell an adult or teacher about it (Rigby, 1997; Li, 2007). As a result, it seems difficult to impossible to provide support, even though it is obvious that help is needed. While male victims are assumed to be less likely to report incidents to adults (Li, 2006), generally, victims seem to be more open and confiding to real-world and online friends about their bullying experiences (Li, 2005; Patchin & Hinduja, 2006; Burgess-Proctor, Patchin, & Hinduja, 2008). Some reasons that may account for the refusal to talk about it, were indicated as feeling ashamed, fear of revenge sought by the bullies, feeling responsible for being bullied, expectations that reports will be trivialized or not believed, and that adults will not intervene, are not capable of helping, or might even compound the problem (Campbell, Butler, & Kift, 2008; Petersen & Rigby, 1999). In addition to that, Remers, Ceuleers and Swager (2006) noted that more than half of the school children did not even know who to approach in school to report incidents of cyberbullying.

The notion of self-esteem can be considered an important factor in the present context, since research indicates that "low self-regard contributes over time to victimization by peers [...] In addition, the experience of being victimized led to diminished self-regard over time. Poor self-concept may play a central role in a vicious cycle that perpetuates and solidifies a child's status as a victim of peer abuse", (Egan & Perry, 1998, p.299). Victims prioritize their online life over their real-world life and are therefore more at risk of giving people that they solely know from the internet information about themselves. Their dependence seems to manifest itself to a greater extent than that of cyberbullies or bystanders. In real life, online victims feel less popular and have fewer friends, which is a pattern also found in face-to-face victims (Vandebosch, Van Cleemput, Mortelmans, & Walrave 2006). This tendency can be explained by findings that victims have low self-esteem and feel rather uncomfortable in social situations, which may lead to an avoidance of such situations, including friendships (Willard, 2005). Long-term cyberbullying will most probably influence this insecure bearing.

With reference to the previous section, it has been assumed that psychological impairments found in victims such as symptoms of depression and anxiety, as well as helplessness are negatively correlated with levels of self-efficacy, while social integration or academic achievement are positively associated with forms of self-efficacy (Maddux, 1995; Bandura, 2001; Bandura, Barbaranelli, Caprana, & Pastorelli, 2002). This provides support to the thesis that victims show generally low levels of self-efficacy.

In conclusion, it can be noted that most incidents of online victimization take place in mid-adolescence, a period in which the pupil is remarkably vulnerable. However, the fundamental problem seems to be that, due to various reasons, victims do not talk with adults about their experiences, which impedes (the development of) effective interventions to a certain degree. Moreover, an important finding is that victims do trust their real-life and online friends. Finally, victims of cyberbullying have basically been characterized as internet-dependent and insecure in their social everyday life with assumably low levels of self-esteem and self-efficacy.

Both, online and offline bullies and their victims were generally found to be same-aged (cf. Schrock & Boyd, 2008), with mid-adolescents being more likely to be bullies (Williams & Guerra, 2007). Raskauskas & Stoltz, (2007) even considered age 13 to 18 to correlate with the probability of engaging in cyberbullying. While little more than 40% of the online victims were clueless about the bullies' identities, almost one third of online victims identified fellow school children as bullies, about one pupil out of ten accused people outside their school and almost 16% considered various bullying sources (Li, 2005). This supports the assumption that "perpetrators are frequently anonymous to the victim, although not necessarily unknown", (Schrock & Boyd, 2008, p.24). In terms of factors relating to bullying behavior, it may seem surprising that lower academic pressure has been found to be associated with higher rates of bullying behavior, compared to high academic pressure (Li, 2007). However, literature provides support for positive effects based on expectations of great academic performances, particularly in combination with caring teachers (Steinberg, 1996). Moreover, it may be suggested that schools with high academic pressure might have higher demands on their school children in general, including a strict code of conduct, which, by whatever means, may reduce bully-incidents. Moreover, the likelihood to fail in school has been found to be higher for cyberbullies than for non-cyberbullies (Ybarra & Mitchell, 2004a). In addition to that, victims generally show better performances in school than bullies (Li, 2005). More than half the number of online bullies rated themselves as internet experts, but the (small) majority indicated the internet to be only averagely important to themselves (Ybarra & Mitchell, 2004a). This is in accordance with the aforementioned assumption that the internet is not as central for bullies as it is for victims.

There are two approaches for explaining bullies' behavior. One the one hand, bullies are seen to lack social skills such as empathy (Bolton & Graeve, 2005; Willard, 2005) and to have problems themselves which results in bullying in order to cover their insecurities and fears (cf. Dowdney, 1993; Ybarra en Mitchell, 2004a). Thus, based on this approach, bullies are rather understood as victims of their social environment, for example as results of indifferent nurturing practices by their parents (Van der Sype & Van Roosbroeck, 2006). On the other hand, bullies are assumed to be capable of making friends and to be engaged in school-related activities (Bolton & Graeve, 2005), but to have a dominant personality and simply want to stay in power by humiliating others. The problem with this type of bully is that their friends and followers may have similar moral attitudes and values, which may have a reinforcing effect on the bully (cf. Dowdney, 1993; Whitted & Dupper, 2005).

In summary, the majority of online bullies are mid-adolescents who are, in many cases, not unknown to the victim. Lower academic pressure and achievements have been associated with bullying. Online bullies rate the role that internet plays in their lives as average, even though they declare to be experts regarding this medium. Bullying behavior has been tried to be accounted for by two different approaches, namely the bully as victim and the bully as dominant character.

For the sake of completeness of contents, yet not relevant regarding the goals of the present study, the phenomenon of *bully/victims* will briefly be looked at. Overlaps in *victims and bullies* have been observed, in the way that about 3 to 12% were considered to be both, aggressors *and* victims of cyberbullying (cf. Schrock & Boyd, 2008). However, this aspect of online bullying has not been well studied, yet, and the size of the overlap has been estimated to be higher (cf. Schrock & Boyd, 2008). While the shared characteristics were mostly based on psychosocial aspects such as "problem behavior, substance use, depressive symptomatology, and low school commitment", (Ybarra & Mitchell, 2004b, p. 1314), the motive could also be considered a uniting factor between bullies and victims, namely retaliation (Twemlow, Sacco, Frank, & Williams, 1996; Burgess-Proctor, Patchin, & Hinduja, 2009).

To sum up, although it can be assumed that bully/victims may share both, psychosocial characteristics and motives for their actions, profound conclusions cannot be drawn based on literature yet.

Bystanders play an essential role in online bullying, as they have the power to influence the situation both positively and negatively. By reporting incidents of cyberbullying and standing up for the victims, they may be able to stop the harassment, while remaining silent can even encourage the bully to continue since this may be interpreted as acceptance or even approval. The former has been described as *bystanders-who-are-part-of-the-solution*, thus, those who actively counteract, and the latter as bystanders-who-are-part-of-the-problem, thus, those who intentionally or not- promote bullying (Willard, 2005). Since bystanders have usually been identified as peers, the chance of a successful intervention that includes peer bystanders seems high considering the strong influence peers have on each other during adolescence (Giles, 2003). However, fairly recent data indicates that less than 35% would become active and tell an adult if they knew about online victimization (Li, 2007). This lack of action on the part of the bystanders might be ascribed to feelings of powerlessness, little self-respect and self-confidence (Harris & Petrie, 2002). About forty years ago, a framework has been introduced by Latane and Darley (1970) in order to explain a phenomenon called the *Bystander effect*. This effect basically states that the likelihood of helping a victim decreases when the number of bystanders increases (Latane & Nida, 1981). The first problem that occurs with increased group size has been labeled audience inhibition. The bystander abdicates to take over responsibility, since they are afraid of negative evaluations on the part of other observers regarding the helping behavior. The second problem concerns *social influence*. Noticing that many people are present but nobody intervenes, inhibits the bystander to help. The third problem, *diffusion of responsibility*, indicates that all bystanders assume that someone else in the crowd will take action, which reduces the perceived individual responsibility and the likelihood to help. As a consequence, it has been suggested that getting directly involved in the situation may enhance feelings of responsibility and therefore the tendency to help (Latane & Darley, 1970). Vandebosch and colleagues (2006) approached the tendency for bystanders to help from the opposite direction. They proposed that it is exactly the anonymity that increases the likelihood for the bystander to take action against bullying in cyberspace, since they do not have to fear that the bully may figure out their identity inevitably.

It can be concluded that both, bystanders' active and passive behavior affect the bullying process. Reasons for a lack of taking action on the side of the bystander can be found on the individual, i.e. levels of self-efficacy and self-esteem as well as on the situational level as described in the context of the Bystander effect.

#### **Risk communication and behavior change**

According to Griffin, Dunwoody, and Neuwirth (1999), systematic processing of information influences attitude formation and behavior change. While the process of risk communication is addressed in the Framework of Risk Information Seeking (FRIS; ter Huurne, 2008), behavior change plays an important role in the *Theory of Planned Behavior* (TPB; Ajzen, 1991). These two theories offer a number of variables that can be seen as key factors in the creation of interventions against cyberbullying. FRIS is relevant for this study since "[t]he basic assumption [...] is that the success or failure of risk communication efforts regarding external safety issues lies in the interaction of the individual's risk-related information-seeking behavior and the development of risk communication efforts that consider the audience's concerns, needs, and information preferences", (ter Huurne, 2008; p.23). Thus, this framework focuses on both the individual's active risk information seeking (or avoiding) behavior and risk-related socialpsychological factors in order to recommend more effective ways for risk communication. Given these considerations, the framework seems to be appropriate to approach the problem or risk of cyberbullying from the communicative perspective. The focus lies on the antecedents of information seeking and processing that have a direct effect on affective responses. These *risk* awareness factors comprise self-efficacy, risk perception, and involvement. In this context, selfefficacy is understood in terms of the own perceived capability to deal with the risk and to be able to protect oneself and others. Risk perception encompasses subjective evaluations of the *likelihood* that oneself or others may get harmed as a result of the risk, its *outcome severity* and affective perceptions regarding the risk. Finally, involvement is related to the perceived *importance, interest, and commitment* regarding risk-related issues. Considering these facets, it can be presumed that feelings of involvement could be related to levels of empathy e.g. in bystanders. The focus on those three factors seems appropriate since the TPB focuses on cognitive factors, which is why the antecedents of affective responses can be considered to be of additional value for the goals of this study. According to the TPB, certain cognitive beliefs can be considered as indirect determinants of behavior and are, in turn, directly influenced by personality traits, demographic variables and *environmental influences*. While the former two can hardly be modified, the latter offers potential approaches via direct school-related measures. This can affect *normative beliefs* about significant others, which in turn, may influence *subjective norms*. Subjective norms have also been considered as an important factor in information seeking and processing (ter Huurne, 2008). As already mentioned in the previous section, peers are the most important influence for adolescents (Emler & Reicher, 1995; Harris, 1995) and it can therefore be assumed that beliefs about the normative expectations of peers will indirectly influence behavior regarding cyberbullying. Another important factor is the *behavioral control* that people perceive to have over performing a certain behavior based on internal (e.g. personal skills, deficiencies, or emotions) and external (e.g. opportunities or barriers) control factors. It has been found that perceived behavioral control can be used synonymously with self-efficacy (cf. Fishbein & Cappella, 2006). Moreover, the individual's *attitude* plays an important role in this theory as it is another indirect antecedent of behavior.

Thus, considering one of the aims of this study, which is to provide recommendations for effective risk communication in order to prevent or change online-bullying behavior, it seems reasonable to choose FRIS and TPB as basis for the assessment of relevant factors. In other words, it has to be assessed to what extent those influential factors are present in and related to victims, cyberbullies and bystanders in order to be able to estimate their relevance for intervening approaches.

#### **Recommended approaches and related factors**

Research, even though still scant, indicates that it may be assumed that preventing online bullying works in a similar manner like taking precautions against traditional bullying (Campbell, 2005; Li, 2007). Since it has been found in the aforementioned studies that the school environment plays an essential role in the bullying process (cf. Pellegrini & Bartini, 2000), "educational, ethical and legally defensible [school] policies" seem necessary in order to inhibit digital bullying (Campbell, Butler, & Kift, 2008, p. 30).

One notion supports the implementation of criminal sanctions against the cyberbully. Kift (2007) grounds this idea on the two findings that, first, cyberbullying can take such extreme forms that it can solely be classified as "criminal conduction" and second, there seems to be a tendency for teachers and parents to approve such sanctions, apparently based on motives like

interest in safety or even frustration. Other literature provides support for the first argument, mentioning death threats as one severe form of cyberbullying (Beran & Li, 2005). However, Kift also considers the young age of some bullies which affects their amenability to law on the one hand, and may come along with "underdeveloped empathy skills, lack of appreciation of the gravity of their conduct, and reduced ability to control their impulses", (p.229) on the other hand. Therefore, she refers to the idea of reintegrative shaming (Braithwaite, 1989) and other educational means in order to stop cyberbullying. The former works basically through creating a situation that makes the offenders openly acknowledge both, their (criminal) misconduct and the fact that significant others, like members of the school community and the family, do not approve or tolerate their (cyberbullying) behavior. This procedure is supposed to provide a basis for reintegrating the delinquent (i.e. the bully) successfully into the community. This idea is linked with educating the involved parties about the qualitative differences within the scope of severity regarding cyberbullying. The goal is to raise parents', teachers' and school children' awareness about the potential criminal liability and, therefore, to deter potential bullies in advance from engaging in cyberbullying. This awareness rising/educational approach finds broad support in literature (Campbell, 2005; Campbell, Butler, & Kift, 2008; Li, 2006, 2007), especially, since the majority of research has indicated that *no-blame interventions* are most effective in terms of fighting traditional bullying (Young, 1998).

Awareness rising is essential (Li, 2007), since it may foster the individual's reflection on and evaluation of their own behavior and should be centered on two goals. First, resolving wrong assumptions or prejudices (e.g. bullying is a part of adolescents and helps to establish the own personality) and putting emphasis on a general increase in empathetic awareness among adolescents in regard of the consequences for victims (Campbell, 2005; Li, 2007; Campbell, Butler, & Kift, 2008). The latter seems beneficial since study outcomes indicate a negative correlation between affective empathy and boys' bullying behavior as well as a positive association between affective empathy and defending the victim, for both genders (Gini, Albiero, Benelli, & Altoè, 2007). In their study, Endresen and Olweus (2001) found that total levels of empathy (comprising emotional distress and concern) were negatively associated with attitudes in favor of bullying for both genders, with girls showing slightly higher levels of empathic responsiveness. An additional interesting finding was that beliefs and attitudes in favor of aggressive or bullying behavior increase the likelihood of bullying (cf. Bentley & Li, 1995). Second, as mentioned before, awareness regarding the criminal potential of cyberbullying seems also relevant (Campbell, 2005, Kift, 2007, Campbell, Butler, & Kift, 2008). In addition to that, Li (2007) addresses the issue of cyber safety strategies. Although her findings indicate that those school children who rate themselves as familiar with the strategies are more likely to become victims of cyberbullying, it seems reasonable to assume that communicating such strategies in a thorough manner may result in profound understanding and implementation of prevention and coping strategies. The question is whether such educational programs should be a continuous part of the curriculum (i.e. as the subject "media education") or whether occasional classes that are, age-wise, explicitly targeted at the group at risk, are sufficient. Furthermore, an important prerequisite for successful bullying-education is based on the extent to which school children perceive their schools to be supportive and involved (Pellegrini & Bartini, 2000). Literature implies that the sense of feeling attached to the own school is related to less emotional problems as well as to successful education and can therefore work as a protective factor for adolescents (Resnick, Bearman, Blum, et al, 1997, p.831). This aspect makes policies that work in a "transparent" and "confidential" manner absolutely essential when it comes to reporting incidents of cyberbullying (Campbell, 2005). According to Li (2007), "creating a culture of caring and kindness" (p.450) seems to be a key notion. Thus, establishing core values in the school environment and in particular among school children may enforce a change in beliefs, attitudes and eventually in behavior.

As already mentioned in the previous sections of the present study, *self-efficacy* (or *perceived behavioral control*) plays a substantial role in the process of bullying. Therefore, it can be understood as a key construct in the development and implementation of programs, regarding victimization, and in terms of making the step to take action when observing cyberbullying. This is in accordance with most literature. For example, Campbell, Butler and Kift (2008) recommend programs aiming at the enhancement of self- esteem and skills that can be applied to solve problems. Empowering the victim seems a logical step, considering the generally positive and sustaining effects of becoming active oneself in order to resolve problems (Denkers, 1993). For victims to become active instead of trying to resolve the problem through sole adult authority (parents, teachers), has also been advised elsewhere (Willard, 2005). This piece of advice seems even more important when considering that bullying behavior takes mostly place when adult supervision is limited or absent (Espelage, Asidao, & Chavez, 1998; Kikkawa, 1987). Aside from focusing on the cybervictim, Li (2007) puts emphasis on the empowerment of the bystanders who are broadly considered to have the potential to reduce online bullying.

In conclusion, literature implies the possibility of similar preventive approaches on online and offline bullying. Aside from legal considerations that stand in contrast to no-blame interventions, educational approaches comprising legal and empathic awareness-raising, the promotion of online safety strategies, and the resolution of prejudices seem to find common consent among experts. Strategies that contribute to these methods may include the establishment of specific values in the school environment and the empowerment of victims and bystanders. Referring to the previous sections, factors that are considered to be crucial regarding interventions against bullying are attitudes, normative beliefs, self-efficacy, (current) behavior and experiences, risk perception, involvement, self-esteem, empathy, psychological distress, acceptance of prejudices, awareness of criminal liability and psychosomatic consequences. The relation between these factors and cyberbullies, victims, and bystanders will be addressed in the remaining part of the present study and references to a number of the described approaches against cyberbullying will be made at the end.

#### Hypotheses I and Research question 1

In the following, a number of hypotheses will be introduced. These hypotheses are related to factors that are assumed to be relevant in the context of cyberbullying and therefore useful for potential preventions and interventions. The remarkable number of hypotheses can be accounted for by the currently scant and partly divergent literature regarding cyberbullying. Therefore, the author does not have a sound basis in order to make a reasonable and more specific choice but has to consider a broad range of both factors that are potentially related to cyberbullying, victimization, and bystanders' behavior and methods to analyze these relations. The hypotheses are subdivided into groups based on the respective theory they belong to, i.e. the TPB or FRIS as described in the section *Risk communication and behavior change* (pp. 16-17). Those factors that do not belong to either theory form another group. Thus, there are three groups of factors whose association with cyberbullying, victimization and bystanders' behavior is assessed based on the following hypotheses.

First, the factors regarding behavior change (TPB) are addressed in terms of their relation to cyberbullies, victims, and bystanders, i.e. *attitude* (towards cyberbullying), *normative beliefs*, and *self-efficacy*, which is subdivided in specific and general self-efficacy. It should be noted that

the concept of self-efficacy plays an important role in both TPB and FRIS, and could therefore also be allocated to the group of factors belonging to FRIS.

H1: Attitudes regarding cyberbullying are positively correlated with cyberbullying H2: Attitudes regarding cyberbullying are negatively correlated with providing help as bystander

H3: Normative beliefs regarding cyberbullying are positively correlated with cyberbullying

H4: Normative beliefs regarding cyberbullying are positively correlated with providing help as bystander

H5: Levels of self-efficacy are negatively correlated with cyberbullying H6: Levels of self-efficacy are positively correlated with providing help as bystander

H7: Levels of specific self-efficacy are lower in cyberbullies than in non-cyberbulliesH8: Levels of specific self-efficacy are lower in victims than in non-victimsH9: Levels of specific self-efficacy are lower in non-intervening than in interveningbystanders

H10: Levels of general self-efficacy are lower in cyberbullies than in non-cyberbulliesH11: Levels of general self-efficacy are lower in victims than in non-victimsH12: Levels of general self-efficacy are lower in non-intervening than in intervening that in the self-efficacy are lower in non-intervening that in intervening that in the self-efficacy are lower in non-intervening that in the self-efficacy are lower in the self

H12: Levels of general self-efficacy are lower in non-intervening than in intervening bystanders

Second, the following hypotheses comprise assumptions about cyberbullies, victims, bystanders in relation to factors that are associated with risk communication. As noted previously, the factors *risk perception* with its facets perceived severity, likelihood, as well as affect and *involvement* belong to FRIS.

H13: Levels of risk perception (severity) are higher in victims than in cyberbullies H14: Levels of risk perception (severity) are lower in non-intervening than in intervening bystanders

H15: Levels of risk perception (likelihood) are higher in victims than in cyberbullies H16: Levels of risk perception (likelihood) are lower in non-intervening than in intervening bystanders

H17: Levels of risk perception (affect) are higher in victims than in cyberbullies H18: Levels of risk perception (affect) are lower in non-intervening than in

intervening bystanders

H19: Levels of involvement are negatively correlated with cyberbullying H20: Levels of involvement are positively correlated with providing help as bystander

Third, hypotheses containing assumptions about the relation between those factors that do not belong to either theory and cyberbullies, victims, and bystanders are addressed. This group of factors comprises general *self-esteem*, with its facets self-liking and self-competence, *general empathy, psychological distress, acceptance of prejudices,* and *awareness of criminal liability* and *psychosomatic consequences* for the victim.

H21: Levels of general self-esteem are significantly correlated with cyberbullying H21.a: Levels of general self-esteem predict cyberbullying H22: Levels of general self-esteem are negatively correlated with becoming a victim H22.a: Levels of general self-esteem predict victimization H23: Levels of general self-esteem are positively correlated with providing help as bystander H23.a: Levels of general self-esteem predict providing help as bystander H24: Levels of self-liking are significantly correlated with cyberbullying H24.a: Levels of self-liking predict cyberbullying H25: Levels of self-liking are negatively correlated with becoming a victim H25.a: Levels of self-liking predict victimization H26: Levels of self-liking are positively correlated with providing help as bystander H26.a: Levels of self-liking predict providing help as bystander H27: Levels of self-competence are significantly correlated with cyberbullying H27.a: Levels of self-competence predict cyberbullying H28: Levels of self-competence are negatively correlated with becoming a victim H28.a: Levels of self-competence predict victimization H29: Levels of self-competence are positively correlated with providing help as bystander H29.a: Levels of self-competence predict providing help as bystander H30: Levels of general self-esteem are lower in victims than in non-victims H31: Levels of general self-esteem are lower in non-intervening bystanders than in intervening bystanders H32: Levels of self-liking are lower in victims than in non-victims H33: Levels of self-liking are lower in non-intervening bystanders than in intervening bystanders H34: Levels of self-competence are lower in victims than in non-victims

H35: Levels of self-competence are lower in non-intervening bystanders than in intervening bystanders

H36: Levels of empathy are negatively correlated with attitudes in favor of cyberbullying

H37: Levels of empathy are negatively correlated with cyberbullying

H38: Levels of empathy are positively correlated with providing help as bystander H39: Levels of empathy are significantly lower in cyberbullies than in noncyberbullies

H40: Levels of empathy are significantly higher in intervening than in non-intervening bystanders

H41: Levels of empathy are positively correlated with feelings of involvement

H42: Levels of psychological distress are positively correlated with cyberbullying H43: Levels of psychological distress are positively correlated with becoming a victim

H44: Levels of psychological distress are negatively correlated with intervening as bystander

H45: Levels of psychological distress are significantly higher in victims than in cyberbullies.

H46: Levels of psychological distress is significantly higher in cyberbullies than in non-cyberbullies

H47: Levels of psychological distress is significantly higher in victims than in non-victims

H48: Levels of psychological distress is significantly higher in non-intervening bystanders than in intervening bystanders

H49: Acceptance of prejudices and attitudes regarding cyberbullying are positively correlated

H50: Acceptance of prejudices and general empathy are negatively correlated H51: Acceptance of prejudices is significantly higher in cyberbullies than in noncyberbullies

H52: Awareness of criminal liability is negatively correlated with attitudes regarding cyberbullying

H53: Awareness of criminal liability is significantly lower in cyberbullies than in non-cyberbullies

H54: Awareness of psychosomatic consequences is negatively correlated with attitudes regarding cyberbullying

H55: Awareness of psychosomatic consequences is positively correlated with general empathy

H56: Awareness of psychosomatic consequences is significantly lower in cyberbullies than in non-cyberbullies

As there are divergent opinions among researchers whether (cyber)bullies suffer from a lack of self-esteem and are victims themselves who want to cover their own insecurities and fears

or whether they do feel good about themselves and use (cyber)bullying as means to stay in power (*see* section *Victims, cyberbullies, and bystanders*, pp.14), the author of the present study chooses to pose a research question instead of a hypothesis.

RQ1: Is there a significant difference between levels of general self-esteem, self-liking, self-competence between cyberbullies and non-cyberbullies?

#### Siblings

As noted in the beginning, another goal of this study is to determine which role siblings play in the context of cyberbullying, more specifically, whether they can be considered as risk or protective factors.

Relationships between siblings have been characterized as the familial relation that last longest throughout life and as influential despite their secondary significance (Bank & Kahn, 1997; Goetting, 1986). This is in accordance with Berk (2006), who states that "[s]iblings exert important influences on development, both directly, through relationships with one another, and indirectly, through the impact an additional child has on the behavior of parents." (p.575). These frequent and emotive interactions create a unique context in which the individual's social abilities develop. Even though the relationship intensity declines and conflicts come up during adolescence, mutual attachment mostly remains sound and siblings still turn to each other for companionship, emotional and practical support in everyday life (Stocker & Dunn, 1994; Cole & Kerns, 2001; Berk, 2006). According to Attachment theory, strong emotional connectedness with family, school and peers are essential for psychosocial development (Bowlby, 1980; Berkman & Glass, 2000). These bonds are still relevant during adolescence since disruption or deterioration of these relationships may result in behavioral, social, and emotional problems (Bond, Carlin, Thomas, & Patton, 2001). Work on the quality of these connections (i.e. sibling closeness/warmth and conflict/coercion) shows that this aspect is related to levels of antisocial behavior, social competence and adjustment (Ingoldsby, Shaw, & Garcia, 2001; Stocker, Burwell, & Briggs, 2002; Bank, Burraston, & Snyder, 2004). Thus, the quality of sibling relationships has been found to predict both, antisocial and prosocial behavior (Criss & Shaw, 2005).

In addition to that, *birth order* and *gender* are considered to be relevant in siblings' experience. As for older siblings, studies assessing levels of satisfaction and frequency of

quarreling indicate that they are assumed to automatically exert some level of authority and responsibility and are preferred over younger siblings (Buhrmester & Furman, 1990; Furman & Buhrmester, 1985). In this context, older siblings often become important counselors for younger siblings by supporting them with challenges concerning peer relationships, academic work, and future decisions (Tucker, McHale, & Crouter, 2001; Yeh & Lempers, 2004). However, there is evidence that older siblings are often responsible for their younger siblings to become acquainted with antisocial peers (Rowe & Gulley, 1992). Regarding gender, female sibling relationships are considered as the most intense connection among siblings in that a lot of emotional and social sharing takes place (Dunn, Slomkowski, Beardsall & Rende, 1994; Buhrmester & Furman, 1990; Howe, Aquan-Assee, Bukowski, & Rinaldi, 2001), while male sibling relationships showed lower levels of caring (Cole & Kerns, 2001). This is in accordance with the finding that females seem generally more devoted to their close relationships than males (cf. Scharf, Shulman, & Avigad-Spitz, 2005).

Based on the author's careful literature review, there are presently no studies available that specifically address the impact of sibling relationship quality, the number and sibling constellation on involvement in cyberbullying. This is true, even though family background has been recognized as important contributor to delinquent and aggressive behavior, including its subset bullying (e.g. Berdondini & Smith, 1996; Bowers, Smith, & Binney, 1994). An Asian study on school bullying among primary school children noted a negative correlation between victimization and unsatisfactory relationships with peers, parents, or siblings (Wong, Lok, Lo, & Ma, 2007). However, the question arises whether these findings are applicable to European adolescents involved in cyberbullying. A Canadian study took the number of 8<sup>th</sup> graders' siblings into consideration and found a stronger positive correlation between family size and the probability of becoming a bully than of becoming a victim (Ma, 2001). Based on *Social learning theory* (Bandura, 1977), this has been accounted for by the assumption that school children carry over their experiences of sibling bullying to school, which is apparently more likely to occur in larger families. Aside from these two exceptions, the majority of research that includes siblings and online bullying rather concentrates on incidents of bullying *between* siblings.

In conclusion, considering the important role that siblings play in the development, the lack of research in the outlined area seems surprising. Thus, it seems crucial to find out more about the impact of sibling relationship quality, the number and sibling constellation, age- and gender-wise, on involvement in cyberbullying. More specifically, the question is which condition

relating to siblings can be seen as protective factor and which should be considered as risk factors.

#### Hypotheses II and Research question 2

Based on the previous elaboration of the literature concerning siblings, the following hypotheses are posed in order to assess whether siblings play a substantial role and if they do, which role that is. Therefore, the *sibling relationship quality*, the *oldest sibling's* respectively *the most important sibling's cyberbullying behavior*, the general, male, and female *number of siblings*, and *birth order* have been assessed regarding cyberbullying, victimization, and bystanders' behavior.

H57: The sibling relationship quality is negatively related to becoming a cyberbully H58: The sibling relationship quality is negatively related to becoming a victim H59: The sibling relationship quality is positively related to becoming a bystander that provides help

H60: Cyberbullying by the oldest sibling predicts cyberbullying in younger siblings H61: Cyberbullying by the most important sibling predicts cyberbullying in another sibling

H62: The number of siblings is positively correlated with cyberbullying. H63: The number of siblings is positively correlated with becoming a victim of cyberbullying

H64: The number of siblings is positively correlated with becoming a bystander that provides help

H65: The number of female siblings is negatively correlated with cyberbullying. H66: The number of female siblings is negatively correlated with becoming a victim of cyberbullying

H67: The number of female siblings positively correlated with becoming a bystander that provides help

H68: The number of male siblings is positively correlated with cyberbullying. H69: The number of male siblings is positively correlated with becoming a victim of cyberbullying

H70: The number of male siblings negatively correlated with becoming a bystander that provides help

H71: There is a significant difference in terms of becoming a cyberbully depending on birth order

H72: There is a significant difference in terms of becoming a victim of cyberbullying

depending on birth order H73: There is a significant difference in terms of becoming a bystander that provides help depending on birth order

As mentioned in the beginning, this study also aims at determining whether there is a difference in cyberbullying experience between German and Dutch participants. Since there does not seem to be literature indicating (dis)advantages for either Dutch or German schools regarding cyberbullying, the author refrains from posing a directional hypothesis in this context and prefers to formulate a research question that may refer to all factors examined in this study:

RQ2: Are there any differences between Dutch and German school children in terms of cyberbullying (and if yes, what are the differences)?

#### Method

#### **Design and procedure**

In order to attain data to determine relevant factors for interventions, the role siblings play and to compare Dutch and German school children in terms of cyberbullying, an online questionnaire was designed. It was conducted in the ninth grades of two Dutch and two German schools with a comparable educational level (*vwo/havo* and *Gesamtschule*) in April and May 2010. The author of the present study chose for ninth graders since literature indicates that cyberbullying plays a significant role around age 15 (cf. Schrock and Boyd, 2008).The total number of participants amounted to n = 386.

As the school children are not of age yet, the parents were asked to give their permission for their children to participate, which all of them did. While all previous arrangements were made in consultation with the principal and year leader of the respective school, the actual implementation of the questionnaire was, without exception, supervised by the author. Thereby, a certain uniformity of the process regarding instructions provided previous to and conditions during the conduction could be ensured. As the conduction took place in the computer room of the respective school, convenient groups of 17-30 school children had to be supervised at a time. As soon as one group had completed the questionnaire, the next group took part. By means of this procedure, the conduction of the online questionnaire, with each taking 15-35min, could be completed within one school day, respectively. The variance of time needed to fill in the questionnaire can be accounted for by the individual reading pace and whether the pupil could skip certain questions as they did not apply to them. More specifically, the latter is based on the principle that answering was basically required and not optional but some questions were automatically skipped when they did not apply to the individual, e.g. if a pupil was an only child, questions addressing the relationship with their siblings did not appear and the pupil was redirected to the following adequate question.

Before they started the questionnaire, the school children had to read an introductory text with information about the purpose of the study, the required behavior during and after their participation (i.e. silence, eyes exclusively on the own screen, not talking about the questionnaire with class mates who had not participated yet etc.), and the warranted anonymity. Especially the latter was additionally emphasized by the author in order to improve the willingness among the school children to answer truthfully. The introductory text also contained a short definition of the term *cyberbullying* describing behaviors that this term entailed in order to avoid any ambiguity when answering the questions. The definition was roughly based on the aforementioned subcategories as defined by Willard (2005) and the means used for cyberbullying as described by Smith and colleagues (2006).

Previous to the implementation of the online questionnaire, a qualitative pilot study was conducted in one German and one Dutch school, respectively, which proved to be helpful. Based on the evaluations of two groups of n = 4 participants (two males, two females), respectively, modifications were made in order to improve the understanding of questions in terms of common Dutch formulations and the clarity of some instructional sentences preceding the questions. Therefore, there were not any problems during the actual implementation of the questionnaire.

# Sample and respondents

Basically, the questionnaires of all school children that participated (n = 386) could be used for analysis, including the answers of 168 Dutch (43.5%), 160 German (41.5%) and 58 school children with a different nationality (15%). The gender ratio is fairly balanced with 53% girls and 47% boys, with a mean age of 15 (SD = 0.69). However, not all questions were answered by each pupil due to the built-in skipping, which has been described above. Moreover, for most hypotheses only those with online bullying experience as cyberbully, victim, or (intervening) bystander were of interest.

The sample seems to be strongly appropriate for research on online bullying as 50% of the school children indicated frequent use of the internet, i.e. at least 1-3h per day, with main activities being online chatting and visiting social network sites (65%). Almost all school children possess a cell phone (98%) and use it on a regular or even daily basis (70%), with almost 66% using their cell phone in school, as well. Thus, the data shows that the present sample of school children has strongly integrated both internet and cell phones into the (social) everyday life and is therefore likely to have had experiences with incidents of online bullying. In addition to that, 87% of the school children have at least one sibling, while 13% reported to be an only child. This additional background characteristic is of interest in terms of questions addressing the role of siblings in the cyberbullying context.

Despite of the appropriateness of the sample, it has to be emphasized that all outcomes of this study have to be interpreted with caution. Even though it can be assumed that they offer indications for general tendencies in the cyberbullying context, the small absolute number of cyberbullies, victims or intervening bystanders qualifies any conclusions in terms of the relative importance of the independent variables.

# Instrument

Aside from variables directly aiming at testing the hypotheses and answering the research questions, the online questionnaire contains additional variables that are of importance for the participating schools (e.g. which measures are preferred by the school children in order to prevent online bullying). However, these variables were not considered in the analysis. As mentioned above, the questionnaire also contains automatic skipping of questions that do not apply to the individual pupil. A Dutch and a German version of the questionnaire can be found in the *APPENDIX*. In the following, the dependent and the independent variables will be described.

**Dependent variables.** Participants were asked to indicate whether they had digitally bullied others during the last two months, whether they became victims of online bullying during the last two months, and whether they had witnessed cyberbullying during this period of time. The answers ranged from never, 1-2 times, 2-3 times per month, once per week to more than once per week. For statistical reasons, based on the ordinal scales assessing the frequency of cyberbullying and victimization, an additional dichotomous scale was established for each of the two factors. These recoded scales simply indicated whether participants were or were not cyberbullies or victims, respectively (1 = no, 2 = yes). In addition to that, participants that reported to have observed online bullying behavior were asked whether and how they intervened or why they did not intervene, with the options yes, I immediately intervened; yes, I offered my future help; yes, I convinced the bully to stop; yes, I turned to others who could provide better help; no, that is not of my business; no, the victim deserved it; no, I did not dare; no, for other reasons. Again, due to analytical considerations, a dichotomous scale was established, with 1 indicating that the participant had not intervened and 2 that the participant had intervened. While both the ordinal and the dichotomous scales relating to cyberbullying and victimization were used in the analysis, only the dichotomous scale that distinguished intervening and non-intervening bystanders was applied.

Independent variables. The determinants of the dependent variables are primarily organized based on TPB and the FRIS. The four remaining psychological and cognitive

independent variables that are unrelated to the two frameworks follow subsequently as well as the factor *sibling relationship* quality. At the end of this section, the demographic and other supplemental variables are described.

Attitude. The attitude towards cyberbullying was assessed based on a scale adapted from Almeida, Correia, & Marinho (2010) and comprises descriptions of both negative and positive behavior. For the present study, the original items were slightly modified from regular bullying to cyberbullying (e.g. The person makes others join in the *cyber*bullying, The person comforts the victim *of cyberbullying* afterwards). Participants were asked how *they* would judge the described behavior (*very bad; bad; neither good, nor bad; good;* or *very good*). The reliability of this scale was very good ( $\alpha = .86$ ).

*Normative beliefs. Normative beliefs* were included in the questionnaire as direct determinant of subjective norms which in turn influence behavior (Ajzen, 1991). They were assessed based on the same ten items that were used to measure attitude. While all aspects like items and the 5-point Likert scale remained the same, the instruction changed in that participants were asked to rate whether their *friends* (as significant others) would find this kind of behavior *very bad; bad; neither good, nor bad; good;* or *very good.* With  $\alpha = .86$ , the reliability of the translated items was very good, as well.

Self-efficacy. Specific self-efficacy, referring to the perceived ability of protecting oneself and others against cyberbullying, was measured by four items (e.g. I am capable of defending victims of online bullying) which yielded a moderate reliability ( $\alpha = .65$ ). The 5-point Likert scale ranged from *I absolutely do not agree to I absolutely agree*, with *I neither agree nor not agree* in the center. In order to measure general self-efficacy, five items of the already existing and validated (Dutch Adaption of the) General Self-efficacy scale (Jerusalem & Schwarzer, 1999, Teeuw, Schwarzer, & Jerusalem, 1994) were selected (e.g. I can always manage to solve difficult problems if I try hard enough). Participants could choose between *not at all true*, *hardly true*, *moderately true* and *exactly true*. The selected and translated items still showed a good reliability ( $\alpha = .75$ ).

*Risk perception*. In the present study, *risk perception* is comprised of the perceived severity of cyberbullying, the perceived likelihood and emotions or affect as response to the risk.

*Perceived severity* was assessed by means of four items (e.g. If I were the target of cyberbullying, the consequences for me would be...) and participants were asked to indicate the degree of perceived severity, ranging from *not severe at all* to *very severe*. The items were created for the present study and show a good reliability ( $\alpha = .83$ ). *Perceived likelihood* was measured by means of three items that showed a moderate reliability of  $\alpha = .61$ . Participants answered questions like *How high do you estimate the probability that you might be affected by cyberbullying* based on a 5-point Likert scale, ranging from *very low* to *very high* with *neither low nor high* in the center. Items measuring this concept were created for the present study, as well. In order to assess *affect* related to risk perception, participants were asked to imagine that they were affected by cyberbullying and to indicate the extent to which they felt *tense, anxious, angry, worried,* or *nervous*. In addition to that, two positively formulated adjectives (*secure* and *calm*) were included so that random answers could be controlled for. The 5-point Likert scale ranged from *not at all* to *very much*. The items yielded a very good reliability of  $\alpha = .88$ .

*Involvement*. The three items used to measure *involvement* concerning cyberbullying were designed for this study. For instance, participants were required to answer the extent to which they were interested in the consequences of cyberbullying or felt that cyberbullying influenced their everyday life. The 5-point Likert scale ranged from *not at all* to *very much*. Unfortunately, the items showed a relatively weak reliability of  $\alpha = .54$ . However, as the author rated each of the three items to have complementary contentual value, this scale was included irrespective of its weak reliability. Despite of its contentual value, it must be noted that any statistic association in the present study that comprises involvement may appear weaker, less significant or sound than it is in reality which may entail an underestimation of the results.

Self-esteem. The 16 items measuring self-esteem derived from the Self-liking/Selfcompetence Scale-Revised Version (SLCS-R) by Tafarodi & Swann (2001). These authors argue that self-esteem is a two-dimensional construct that is composed of self-liking and selfcompetence. This two-dimensional conceptualization of self-esteem was included since it breaks down the concept of self-esteem and therefore sheds more light on the involved parties' emotional experience. Therefore, eight items for each scale were included which were both negatively and positively keyed (e.g. I am highly effective at the things I do, I tend to devalue myself). Participants were asked to rate these items on a 5-point Likert scale ranging from strongly disagree to strongly agree. The reliability analysis of the translated items was very good for both scales combined or general self-esteem ( $\alpha = .86$ ) and showed good to substantial reliabilities for self-linking and self-competence, with  $\alpha = .83$  and  $\alpha = .76$ , respectively.

*General empathy. General empathy* was assessed based on nine items of a subscale similar to the Jackson Personality Inventory-Revised (JPI-R; Jackson, 1994). Participants were asked to indicate whether the described behavior (e.g. I feel others' emotions, I seldom get emotional) applied to them based on a dichotomous scale (*true* vs. *false*). The behavior was both positively and negatively keyed. The translated items showed an acceptable reliability of  $\alpha = .72$ .

*Psychological distress*. The items used to assess *psychological distress* were based on the 4-item format of the Center of Epidemiological Studies Depression Scale (CES-D, Melchior, Huba, Brown, & Reback, 1993). By means of a scale ranging from *rarely or none of the time* (*less than 1 day*), *some or little of the time* (*1-2 days*), *occasionally or a more moderate amount of time* (*3-4 days*) to more or *all of the time* (*5-7 days*), participants had to indicate to which extent questions like *I felt lonely* or *I felt sad* applied to them. The results of the reliability analysis showed that the translated items were substantially reliable, i.e.  $\alpha = .81$ .

*Prejudices.* Three prejudices were formulated by the author of this study (e.g. Becoming the victim of cyberbullying consolidates the victim's personality) in order to assess the degree of acceptance from the part of the participants. The items could be rated on a 7-point Likert scale ranging from *I totally reject this* to *I totally agree* with the option *neither agree nor reject* in the center. The reliability of the items was acceptable ( $\alpha = .75$ ).

Sibling relationship quality. In order to assess the perceived quality of sibling relationships, the author of the present study oriented towards items put online by Williams College (n.d.) which strongly resemble items of the Sibling Relationship Questionnaire (SRQ, Furman & Buhrmester, 1985). As the number of items was substantial, a selection of 17 items was made for the present study, focusing on the dimensions relative status/power, warmth/closeness, and conflict as the author of this study expected these dimensions to be especially relevant in terms of influencing the likelihood of social learning among siblings. Relative status/power includes items such as How much does this sibling tell you what to do,

while *warmth/closeness*, which is related to prosocial behavior, contains items such as *How much do you and this sibling tell each other everything* and *conflict*, which is related to overall negativity in the relationship, comprises items such as *How much do you and this sibling insult each other and call each other names* (Criss & Shaw, 2005). In order to answer these questions, the participants were required to pick their favorite or most important sibling (if they only had one, they were asked to think of this one) and to indicate how much time they spend together in a regular week. Unlike the original version, the author of the present study decided to use a 10-point scale ranging from *not at all* to *extremely much* in order to promote a fairly precise rating by the participant. The reliability of the new items was very good, i.e.  $\alpha = .89$ .

Demographics and supplemental variables. Aside from measures of gender, age, and nationality, participants were asked to indicate the amount of time they spend on the internet on a daily basis as well as their main activity when being online. The former ranged from 0-1h to more than 6h, while the latter offered the answers homework, online chats, visiting social network sites or other (which could be specified manually). Moreover, participants were asked whether they possessed a cell phone, whether they used it in school and how often they used in general, with the latter ranging from never, seldom, sometimes, regularly to daily.

Questions that were supposed to yield supplemental background information regarding cyberbullying and victimization were whether school children knew if their school had adopted measures against cyberbullying (*yes/no* answers) and those who had become victims were asked whether they had confided their experiences to someone. Regarding the latter, the options were *no*, *with nobody; yes, with a friend I know from the internet; yes, with a teacher; yes, with my parents; yes, with a friend;* or *yes, with someone else* and checking multiple answers was possible. To make the picture more complete, it was additionally assessed whether participants were aware of the criminal liability and the potential psychosomatic consequences of cyberbullying, two questions addressing these topics were posed, with answers based on a 5-point scale ranging from *no, by no means* to *yes, I am very sure*, including the option *no idea*.

At the end of the questionnaire, participants were asked to answer questions about their siblings that would supplement the data gathered about the sibling relationship quality. For instance, in an open question it was required to indicate the number of sisters and brothers. Moreover, participants were asked to indicate their position relative to their siblings in terms of birth order (i.e. oldest, youngest child etc.) and whether their oldest or respectively most

important sibling has ever cyberbullied themselves, with answers on a 6-point scale ranging from *never* to *frequently*, including the option *I don't know*.

Since the majority of relevant and reliable scales that are freely obtainable in the internet are solely available in English, the author considered it necessary to translate these scales into German and Dutch so that the school children would read the questions in a language they could definitely master. Therefore, confounds due to language constraints in the school children could be limited. The following procedure was applied to ensure a decent translation and comparability between the two versions. First, the author translated the scales from English into German and from German into Dutch. Then the Dutch version was proof-read by a Dutch native speaker. In order to employ a careful back-translation, the corrected version was finally given to a university student who is fluent in both languages as he was raised bilingually and who was unfamiliar with the original items. He finally translated the Dutch version back into German. Based on this scientific procedure, inconsistencies in the two versions could be detected and revised so that the author could be very confident that the new versions were comparable in terms of meaning of the questions. The scales in question are normative beliefs and attitudes, self-esteem, general empathy, psychological distress, and sibling relationship quality. In this context, general self*efficacy* is the sole exception as both a validated German and a Dutch version are freely available. The above-mentioned original scales were validated by their authors and brought acceptable to good results regarding their reliability. The remaining items that measure additional potential determinants of the dependent variables were originally created for this very study.

#### Results

#### **Dependent variables**

**Descriptives.** Statistical analysis indicates that 12% of the school children reported to have cyberbullied at least once during the last two months (n = 46) and 6% became victims at least once during the same period (n = 22). These data are fairly in accordance with the general findings from other studies as described in the section *Statistics and prevalence*. Besides, only a very small number of school children (n = 7 or 1.8%) reported to have experienced both being a cyberbully and a victim. Moreover, 32% indicated to have witnessed online bullying at least once during the last two months (n = 123) and 46% of these bystanders actually intervened and helped the victim when observing online bullying (n = 56). These latter findings are remarkably lower, respectively higher than expected based on literature as described in sections *Statistics and prevalence* (p.7) and *Victims, cyberbullies, and bystanders* (p.15).

In the Netherlands, only about 3% (n = 5) became victims and 8% (n = 15) were cyberbullies. With 8% (n = 17) victims and 15% (n = 31) cyberbullies, the rate was remarkably higher in Germany. However, if they became bystanders, 48% (n = 44) of German school children provided help, while the rate was a little lower in the Netherlands with 39% (n = 12).

While only 16% of the school children indicated to know whether their school has adopted measures against cyberbullying (n = 62), a more positive note is that the great majority of victims stated to have talked with others about their experiences (82%) and that, with one exception, all of them felt understood. With regard to siblings, a notable finding is that the majority of school children stated that neither their oldest sibling nor their most important sibling has ever cyberbullied (n = 119 or 55% and n = 215 or 64%, respectively). These outcomes will be referred to and further elaborated on in the *Discussion*.

Analysis. In terms of *gender*, a significant difference was found regarding cyberbullying based on the ordinal scale (t (384) = 1.94, p < .05), with boys indicating higher scores (M = 1.28, SD = .82) than girls (M = 1.15, SD = .50) which was expected based on literature. While no significant difference was found concerning victimization, a marginal difference exists in terms of intervening as bystander (t (120) = - 1.55, p < .10) with girls providing more help to victims of cyberbullying (M = 1.52, SD = .50) than boys (M = 1.38, SD = .49), which has also been expected.

Referring to *nationality*, a significant difference was found between German and Dutch school children in terms of cyberbullying (t (384) = -2.11, p < .05) and victimization (t (384) = -2.37, p < .05) based on the dichotomous scale, respectively, with higher scores among German school children ( $M_c$ = 1.15,  $SD_c$ = .36;  $M_v$ = 1.08,  $SD_v$ = .28)<sup>1</sup> than among Dutch school children ( $M_c$ = 1.08,  $SD_c$ = .28;  $M_v$ = 1.03,  $SD_v$ = .16), while there was no significant difference regarding intervening as bystander (t (120) = -.93, n.s.). These latter findings are of importance regarding the *second research question* whether there are any differences among Dutch and German school children in terms of cyberbulling experiences, which will be further elaborated on at the end of this section (*see also* Table 7).

A remarkable finding was that based on the dichotomous victimization scale, only

**Table 1.** Mean scores of only children and children with siblings on becoming a cyberbully, a victim or an intervening bystander

	<b>Cyberbully</b> <sup>a</sup> <b>Cyberbully</b> <sup>a</sup>	$m{n}$ cyberbully(d) $m{n}$ cyberbully(o)	Victim <sub>d</sub> <sup>a</sup> Victim <sub>o</sub> <sup>a</sup>	<b>n</b> victim(d) <b>n</b> victim(o)	Bystander <sup>b1</sup>	n intervening bystander
	Mean (SD)		Mean (SD)		Mean (SD)	
Only children	1.10 (.31)	49	1.12 (.33)	49	1.61 (.50)	23
	1.18 (.60)	49	1.12 (.33)	49		
Children with	1.12 (.32)	336	1.05 (.21)	336	1.43 (.50)	98
siblings	1.21 (.68)	336	1.08 (.43)	336		
Mean difference	02		.07**		.18#	
	03		.04			

*Note*. <sup>a</sup>: n = 385; <sup>b</sup>: n = 121

dichotomous scale: Answers were recoded into 1 (non-cyberbully/non-victim) and 2 (cyberbully/victim). The values represent the mean sum scores of only children and children with siblings, respectively; higher scores indicate a higher rate of cyberbullies/ victims.

o ordinal scale: Scales ranging from 1 to 5; higher scores indicate higher levels of cyberbullies / victims

<sup>1</sup> Answers were recoded into 1 (non-intervening bystander) and 2 (intervening bystander). The values represent the mean sum scores of only children and children with siblings; higher scores indicate a higher rate of intervening bystanders.

\* significant at p < .01

\*\* significant at p < .05

# significant at p < .10

 $<sup>^1</sup>$  Mc: Mean scores cyberbullies; SDe : Standard deviations cyberbullies  $M_{\rm v}$ : Mean scores victims; SDe : Standard deviations victims

*children* seem to be significantly more at risk of becoming victims of cyberbullying than *children* with siblings (t (383) = 2.12, p < .05, see Table 1). This significant difference does not hold true for cyberbullying, though. However, a marginally significant difference has been found between only children and children with siblings in terms of providing help as a bystander (t (119) = 1.56, p < .10), with only children providing more help (see Table 1).

### **Independent variables**

All of the subsequently described *significant* correlations are outlined in *Table 6* (p.47).

Attitude. Bivariate correlation analysis shows that attitudes regarding cyberbullying are positively correlated with *cyberbullying*, which holds true for the dichotomous and the ordinal scale ( $r_d = .14$ , p < .01 and  $r_o = .17$ , p < .01)<sup>2</sup> and provides support for hypothesis 1. Although only a marginal significance exists, hypothesis 2 can also be confirmed since attitudes regarding cyberbullying are negatively correlated with *providing help as bystander* (r = ..14, p < .10).

**Normative beliefs.** Normative beliefs as direct determinants of subjective norms were found to be weakly but significantly correlated with *cyberbullying*, with the correlations being based on both the dichotomous and the ordinal scale, respectively ( $r_d = .18$ , p < .01 and  $r_o = .19$ , p < .01). Thus, hypothesis 3 can be confirmed. However, hypothesis 4 that states that normative beliefs regarding cyberbullying are positively correlated with *providing help as bystander*, does not find statistical support.

**Self-efficacy.** By means of bivariate correlation analysis, it has been found that both specific and general self-efficacy are positively correlated with *providing help as bystander*, with r = .35 (p < .01) and r = .17 (p < .05). Therefore, hypothesis 6 can be confirmed. Hypothesis 5 that states that levels of self-efficacy are negatively correlated with *cyberbullying* did not find any statistical support.

The following analyses have been conducted by means of the independent t-test. Regarding *specific self-efficacy*, i.e. the perceived ability to protect oneself and others against cyberbullying, the only significant difference between intervening and non-intervening bystanders (t (120) = -4.09, p < .01), with non-intervening bystanders showing lower levels of this specific self-efficacy (M= 3.29, SD= .85) than intervening bystanders (M= 3.89, SD= .76) as

 $<sup>^2\,</sup>r_{d:}$  Pearson correlation dichotomous,  $r_{o:}$  Pearson correlation ordinal

predicted in hypothesis 9. While the tendencies in hypotheses 7 (Levels of specific self-efficacy are lower in cyberbullies than in non-cyberbullies) and 8 (Levels of specific self-efficacy are lower in victims than in non-victims) were as expected (*see* Table 2) the hypotheses were not significant and could therefore not be confirmed. Regarding *general self-efficacy*, a marginal difference in terms of victimization (t (384) = 1.65, p < 0.10) and a significant difference relating to intervening as bystander (t (120) = -1.92, p < 0.05) could be found. As the tendencies were also as expected (*see* Table 2), hypotheses 11 (Levels of general self-efficacy are lower in victims than in non-victims) and 12 (Levels of general self-efficacy are lower in non-intervening than in intervening bystanders) could be confirmed. Hypothesis 10 (Levels of general self-efficacy are lower in self-efficacy are lower in cyberbullies) had to be rejected (t (384) = -.06, n.s.).

	п	Self-efficacy (specific) <sup>1</sup>	Self-efficacy (general) <sup>2</sup>
		Mean (SD)	Mean (SD)
Cyberbully <sup>a</sup> Non-cyberbully <sup>a</sup>	46 340	3.52 (.86) 3.54 (.83)	2.98 (.61) 2.98 (.54)
Mean difference		.02	.00
Victim <sup>a</sup> Non-victim <sup>a</sup>	22 364	3.42 (1.05) 3.54 (.82)	2.79 (.55) 2.99 (.55)
Mean difference		.12	.20 <sup>#</sup>
Intervening bystander <sup>b</sup> Non-intervening bystander <sup>b</sup>	56 66	3.89 (.76) 3.29 (.85)	3.07 (.41) 2.87 (.67)
Mean difference		$.60^{*}$	.20**

#### Table 2. Mean scores of self-efficacy

*Note*. <sup>a</sup>: N = 386; <sup>b</sup>: N = 122

 $<sup>^1</sup>$  Scales ranging from 1 to 5; higher scores indicate higher levels of self-efficacy.

 $<sup>^2</sup>$  Scales ranging from 1 to 4; higher scores indicate higher levels of self-efficacy.

<sup>\*</sup> significant at p < .01

 $<sup>^{\</sup>ast\ast}$  significant at p < .05

<sup>#</sup> significant at p < .10

**Risk perception.** The following analyses have been conducted by means of the independent t-test. Referring to the perceived *severity* of cyberbullying, both hypothesis 13 (Levels of risk perception (severity) are higher in victims than in cyberbullies) and hypothesis 14 (Levels of risk perception (severity) are lower in non-intervening than in intervening bystanders) found statistical support ( $t_{13}$  (52) = 2.32, p < .05 and  $t_{14}$  (120) = -3.85, p < .01, *see* Table 3).

Turning to the perceived *likelihood* of cyberbullying to occur, there is a significant difference between cyberbullies and victims (t (52) = 2.39, p < .05), with the tendency as predicted (*see* Table 3) in hypothesis 15 that states that levels of risk perception (likelihood) are higher in victims than in cyberbullies. Although the tendency of the mean scores of non-intervening and intervening bystanders was as predicted (*see* Table 3) in hypothesis 16 (Levels of risk perception (likelihood) are lower in non-intervening than in intervening bystanders), this difference was not significant (t (120) = -.36, *n.s.*).

	n	Risk perception (severity) <sup>1</sup>	Risk perception (likelihood) <sup>2</sup>	Risk perception (affect) <sup>3</sup>
		Mean (SD)	Mean (SD)	Mean (SD)
Cyberbully <sup>a</sup>	39	2.88 (1.02)	2.19 (.81)	2.62 (1.15)
Victim <sup>a</sup>	15	3.60 (1.03)	2.84 (1.12)	3.24 (.86)
Mean difference		1.28**	.65**	.62**
Intervening bystander <sup>b</sup>	56	3.72 (.88)*	2.52 (.91)	3.01 (1.07)
Non-intervening bystander <sup>b</sup>	66	3.02 (1.11)*	2.46 (.88)	2.84 (1.15)
Mean difference		.70*	.06	.17

#### **Table 3.** Mean scores of risk perception

Note. <sup>a</sup>: N = 54; <sup>b</sup>: N = 122

<sup>2</sup> Scales ranging from 1 to 5; higher scores indicate higher levels of perceived likelihood.

<sup>3</sup> Scales ranging from 1 to 5; higher scores indicate higher levels of affect.

# significant at p < .10

<sup>&</sup>lt;sup>1</sup> Scales ranging from 1 to 5; higher scores indicate higher levels of perceived severity.

<sup>\*</sup> significant at p < .01

<sup>\*\*</sup> significant at p < .05

In terms of risk perception as *affect*, it can be assumed that a significant difference exists between cyberbullies and victims (t (52) = 1.88, p < .05), with a tendency as expected (*see* Table 3) in hypothesis 17 that states that levels of risk perception (affect) are higher in victims than in cyberbullies. Thus, hypothesis 17 can be confirmed. In contrast to that, hypothesis 18 (Levels of risk perception (affect) are lower in non-intervening than in intervening bystanders) did not prove true (t (120) = -.85, *n.s.*), even though the direction was as predicted (*see* Table 3).

**Involvement.** Based on bivariate correlation analysis, it was found that there is a weak but significant negative correlation between levels of *involvement* and *cyberbullying* based on the ordinal scale (r = -.09, p < .05). Therefore, hypothesis 19 can be confirmed. Hypothesis 20 (Levels of involvement are positively correlated with providing help as bystander) can be confirmed as bivariate correlation analysis yields a weak but significant positive correlation (r =

.17, p < .05). Again, it has to be emphasized that statistic associations that comprise involvement may appear weaker, less significant or sound than it is in reality due to its weak reliability and may entail an underestimation of the results.

**Self-esteem.** According to the results from bivariate correlation analysis, there are significant positive correlations between general self-esteem and *cyberbullying* for both scales ( $r_d = .13, p < .01$  and  $r_o = .13, p < .01$ ) and negative correlations with *victimization* for both scales ( $r_d = -.09, p < .10$  and  $r_o = -.12, p < .05$ ). The same tendency holds true for *self-liking* and both scales for *cyberbullying* ( $r_d = .10, p < .05$  and  $r_o = .09, p < .05$ ) and *victimization* ( $r_d = -.09, p < .05$  and  $r_o = -.11, p < .05$ ). While the positive correlations between *self-competence* and *cyberbullying* are significant for both scales ( $r_d = .12, p < .05$  and  $r_o = .14, p < .01$ ), the negative correlation with *victimization* is solely marginally significant for the ordinal scale (r = -.08, p < .10). Correlations with *providing help as bystander* were not significant. Therefore, hypotheses 23 (23a), 26 (26a), and 29 (29a) have to be rejected.

Based on the bivariate correlation analysis, linear regression analysis has been used to test whether self-esteem, self-liking, and self-competence predict cyberbullying and victimization. As general self-esteem predicts cyberbullying ( $F_d$  (1, 374) = 6.00, p < .05 and  $F_o$  (1, 374) = 6.45, p < .05) for both scales and victimization for the ordinal scale ( $F_o$  (1, 374) = 5.26, p < .05), hypotheses 21a and 22a can be confirmed. Self-liking predicts cyberbullying with a marginal significance for both scales ( $F_d$  (1, 380) = 3.54, p < .10 and  $F_o$  (1, 380) = 3.10, p < .10) and is also a predictor of *victimization* for both scales ( $F_d$  (1, 380) = 3.00, p < .05 and  $F_o$  (1, 380) = 4.76, p < .05). Thus, hypotheses 24a and 25a can be confirmed. *Self-competence* is a strong predictor of *cyberbullying* for both scales ( $F_d$  (1, 378) = 5.32, p < .05 and  $F_o$  (1, 378) = 7.54, p < .01), but does not predict anything else. Based on this outcome, only hypotheses 27a can additionally be confirmed. Hypothesis 28a (Levels of self-competence predict victimization) has to be rejected.

*General self-esteem.* The following analyses have been conducted by means of the independent t-test. A marginally significant difference could be found between victims and non-victims (t (374) = 1.64, p < .10) with the tendency as predicted in hypothesis 30 (*see* Table 4). Hypothesis 31 that states that levels of general self-esteem are lower in non-intervening *bystanders* than in intervening bystanders, did not find any statistical support (t (116) = .38, *n.s.*).

Self-liking, which is one dimension of self-esteem, is significantly lower in victims than in non-victims (t (380) = 1.73, p < .05, see Table 4), as predicted in hypothesis 32. The hypothesis 33 that levels of self-liking are lower in non-intervening bystanders than in intervening bystanders could not be confirmed.

	Self-esteem	n self-esteem	Self-liking <sup>2</sup>	<b>n</b> self-liking	Self-competence <sup>3</sup>	n self-
	(general) <sup>1</sup>		541-liking	self-liking	Sur-competence	
	Mean (SD)	(general)	Mean (SD)		Mean (SD)	competence
	Mean (SD)		mean (SD)		Mean (SD)	
Cyberbully	3.88 (.56)	44	4.12 (.70)	45	3.63 (.57)	45
Non-cyberbully	3.61 (.72)	332	3.82 (1.03)	337	3.39 (.67)	335
Mean difference	.27*		.30**		.24**	
Ν		376		382		380
Victim	3.40 (.67)#	22	3.50 (.89)**	22	3.31 (.62)	22
Non-victim	3.66 (.71)#	354	3.88 (1.01)**	360	3.42 (.67)	358
Mean difference	.26#		.38**		.11	
Ν		376		382		380
Intervening bystander	3.56 (.65)	55	3.71 (.85)	55	3.40 (.65)	56
Non-intervening bystander	3.61 (.69)	63	3.82 (.83)	66	3.35 (.74)	63
Mean difference	.05		.11		.05	
Ν		117		121		119

#### Table 4. Mean scores of self-esteem

Note. <sup>1</sup> Scales ranging from 1 to 5; higher scores indicate higher levels of self-esteem.

<sup>2</sup> Scales ranging from 1 to 5; higher scores indicate higher levels of self-liking.

<sup>3</sup>Scales ranging from 1 to 5; higher scores indicate higher levels of self-competence.

\* significant at p < .01

\*\* significant at p < .05

# significant at p < .10

Self-competence is the other dimension of self-esteem. Although the tendencies of the mean scores (see Table 4) correspond with the predictions made in hypothesis 34 (Levels of self-competence are lower in victims than in non-victims) and 35 (Levels of self-competence are lower in non-intervening bystanders than in intervening bystanders), they are far from being significant (t (378) = .79, n.s. and t (117) = -.41, n.s., respectively). The variations between the three factors in terms of the number of participants cannot be accounted for by the author and is presumably attributable to technical shortcomings of the applied online program. However, as these variations are minor and therefore tolerable, the necessity to take further account of them regarding the interpretation is not given.

**Research question 1.** As there are divergent opinions among researchers whether (cyber)bullies suffer from a lack of self-esteem and are victims who want to protect themselves or whether they do feel good about themselves and have fun harassing others, the author of the present study chooses to pose a research question instead of a hypothesis. The first research question is whether there is a significant difference between levels of general self-esteem, self-liking, self-competence between cyberbullies and non-cyberbullies? As described above, self-esteem, self-liking, and self-competence are positively correlated with and predict cyberbullying. In terms of *general self-esteem*, there is a significant difference between cyberbullies and non-cyberbullies (t (374) = -2.45, p < .01, *see* Table 4). *Self-liking* is significantly higher in cyberbullies (M = 4.12, SD = .70) than in non-cyberbullies (M = 3.82, SD = 1.03; t (380) = -1.88, p < .05) and self-competence has been found to be significantly higher in cyberbullies (M = 3.63, SD = .57) than in non-cyberbullies (M = 3.39, SD = .67, t (378) = -2.31, p < .05), as well.

**General empathy.** By means of bivariate correlation analysis, it has been found that *general empathy* and *attitude* regarding cyberbullying are negatively associated with r = -.31 (p < .01) which confirms hypothesis 36. Moreover, general empathy can be assumed to correlate negatively with *cyberbullying* for the ordinal scale (r = -.13, p < .01) and to correlate positively with intervening as *bystander* (r = .22, p < .01), which provides statistical support for hypothesis 37 and 38.

The following analyses are based on independent t-test analysis. As there is no significant difference between cyberbullies and non-cyberbullies in terms of levels of general empathy (t (383) = 1.14, *n.s.*), hypothesis 39 has to be rejected. Hypothesis 40 could be confirmed (t (119) =

-2.49, p < .01), as intervening bystanders scored higher on general empathy (M = 2.72, SD = .24) than non-intervening bystanders (M = 2.60, SD = .29).

Finally, hypothesis 41 proved to be true since bivariate correlation analysis indicates that levels of general empathy are positively correlated with feelings of *involvement* (r = .28, p < .01). Based on linear regression analysis, it can be assumed that levels of general empathy predict feelings of involvement (F(1, 383) = 32.36, p < .01).

**Psychological distress.** Based on bivariate correlation analysis, only hypothesis 43 can be confirmed as there is a positive correlation between *psychological distress* and *victimization* for both scales ( $r_d = .16$ , p < .01 and  $r_o = .14$ , p < .01). Hypotheses 42 and 44 have to be rejected.

The following analyses have all been conducted by means of the independent t-test. A significant difference could be found between victims and cyberbullies, with victims scoring higher on psychological distress than cyberbullies (t (51) = 2.36, p < .05, see Table 5). Therefore, hypothesis 45 can be confirmed. Although the direction stated in hypothesis 46 (Levels of

	n	Psy. distress <sup>1</sup>	
		Mean (SD)	Mean difference
Cyberbully <sup>a</sup>	45	1.59 (.65)	25
Non-cyberbully <sup>a</sup>	340	1.54 (.64)	.05
Victim <sup>a</sup>	22	1.95 (.73)	*
Non-victim <sup>a</sup>	363	1.52 (.63)	.43*
Intervening bystander <sup>b</sup>	56	1.71 (.65)	
Non-intervening bystander <sup>b</sup>	65	1.60 (.66)	.11
Victim <sup>c</sup>	15	2.08 (.79)	.51**
Bully <sup>c</sup>	38	1.57 (.68)	

Table 5. Mean scores of psychological distress

*Note*. <sup>a</sup>: N = 385; <sup>b</sup>: N = 121; <sup>c</sup>: N = 53

<sup>1</sup> Scales ranging from 1 to 4; higher scores indicate higher levels of psychological distress.

\* significant at p < .01

\*\* significant at p < .05

# significant at p < .10

psychological distress is significantly higher in cyberbullies than in non-cyberbullies) can be noticed (*see* Table 5), the difference is far from being significant (t (383) = -.46, n.s.). While hypothesis 48 (Levels of psychological distress is significantly higher in non-intervening bystanders than in intervening bystanders) could not be confirmed, either, there is a significant difference between victims and non-victims (t (383) = - 3.09, p < .01) that also showed the tendency as expected (*see* Table 5). Thus, hypothesis 47 (Levels of psychological distress is significantly higher in victims than in non-victims) can be confirmed.

**Prejudices.** Hypothesis 49 states that *acceptance of prejudices* is positively correlated with *attitudes* regarding cyberbullying. As bivariate correlation analysis indicates that there is a positive correlation between the independent variable and attitude (r = .54, p < .01), this hypothesis can be confirmed. Moreover, acceptance of prejudices correlates negatively with *general empathy* (r = .48, p < .01), which confirms hypothesis 50.

As predicted in hypothesis 51, cyberbullies scored significantly higher on acceptance of prejudices than non-cyberbullies (t (153) = - 4.25, p < .01), with M = 1.91 (SD = .60) and M = 1.37 (SD = .49).

Awareness. In terms of awareness of *criminal liability*, it can be assumed that this concept is significantly and negatively correlated with *attitudes* towards cyberbullying (r = -.13, p < .05). Thus, hypothesis 52 finds statistical support. Against expectations, significantly more cyberbullies than non-cyberbullies were aware of the criminal liability of cyberbullying (t (384) = -1.70, p < .05), with M = 2.63 (SD = 1.45) and M = 2.23 (SD = 1.52). Thus, hypothesis 53 cannot be confirmed.

Regarding the awareness of *psychosomatic consequences* for the victim, it can be inferred from bivariate correlation analysis that there is a negative correlation between the independent factor and *attitude* towards cyberbullying (r = -.30, p < .01) as predicted in hypothesis 54. Moreover, awareness of the psychosomatic consequences for the victim correlates positively with *general empathy* (r = .24, p < .01), which provides support for hypothesis 55. Hypothesis 56 can be confirmed as cyberbullies scored significantly lower on the awareness of psychosomatic consequences (t (384) = 3.85, p < .01, M = 2.80, SD = 1.47 and M = 3.43, SD = .96).

In the following, the results in terms of the siblings' influence on cyberbullying, victimization, and bystanders' behavior are described.

**Sibling relationship quality.** Hypothesis 57, which states that the *sibling relationship quality* is negatively related to becoming a cyberbully, cannot be confirmed based on the results of the bivariate correlation analysis. This holds true for both hypothesis 58 (The sibling relationship quality is negatively related to becoming a victim online) and hypothesis 59, which predicts that the sibling relationship quality is positively related to becoming a bystander that provides help.

**Oldest/most important sibling.** The independent factors correlate positively with *cyberbullying*, with cyberbullying by the *oldest sibling* being  $r_d = .33$  (p < .01) or  $r_o = .40$  (p < .01) and cyberbullying by the *most important sibling* being  $r_d = .19$  (p < .01) or  $r_o = .29$  (p < .01). Based on linear regression analysis, it can be assumed that hypothesis 60 (Cyberbullying by the oldest sibling predicts cyberbullying in younger siblings) can be confirmed for both scales ( $F_d$  (1, 139) = 16.90, p < .01 and  $F_o$  (1, 139) = 27.11, p < .01). As cyberbullying by the most important sibling is also a very strong predictor of cyberbullying in other siblings for both scales ( $F_d$  (1, 238) = 8.63, p < .01 and  $F_o$  (1, 238) = 21.44, p < .01), hypothesis 61 can be confirmed, as well.

Number of siblings. All analyses of the hypotheses relating to the number of siblings have been conducted by means of bivariate correlation analysis. First, there is no evidence for a significant correlation between the *number of siblings* and *cyberbullying*, which is why hypothesis 62 cannot be confirmed. Second, a weak but significant correlation was found between the number of siblings and becoming a *victim* based on the ordinal victimization scale (r = .11, p < .05). Thus, hypothesis 63 can be confirmed. Third, like hypothesis 62, hypothesis 64 (The number of siblings is positively correlated with becoming a bystander that provides help) lacks evidence of a significant correlation.

**Number of female siblings.** Hypotheses 65 states that the *number of female siblings* is negatively correlated with becoming a cyberbully, hypothesis 66 predicts that the number of female siblings is negatively correlated with becoming a victim, and hypothesis 67 contains the assumption that the number of female siblings is positively correlated with becoming an

intervening bystander. Based on bivariate correlation analysis, it can be assumed that there is no significant correlation at all. Therefore, all hypotheses have to be rejected.

Number of male siblings. Bivariate correlation analysis indicates that there is neither statistical support for hypothesis 68 (The number of male siblings is positively correlated with cyberbullying) nor for 70 (The number of male siblings negatively correlated with becoming a bystander that provides help). However, a weak but significant positive correlation between the *number of male siblings* and becoming a *victim* could be found based on the ordinal victimization scale (r = .13, p < .05). Thus, hypothesis 69 could be confirmed.

	Cyberbullying <sub>d</sub> Cyberbullying <sub>o</sub>	$Victimization_d$ $Victimization_o$	Bystanders' behavior	Attitude towards cyberbullying	Involvement	General empathy
Attitude towards cyberbullying	$.14^{*}_{d}$ , $.17^{*}_{o}$		14#			
Normative beliefs	$.18^{*}_{d}$ , $.19^{*}_{o}$					
General self-efficacy Specific self-efficacy			.17** .35*			
Involvement	09 <sup>**</sup> °		.17**			
Self-esteem Self-liking Self-competence	$\begin{array}{ccc} .13^{*}{}_{d,o} \\ .10^{**}{}_{d}, & .09^{**}{}_{o} \\ .12^{**}{}_{d}, & .14^{*}{}_{o} \end{array}$	$\begin{array}{c} \text{09}^{\#}_{d} , & \text{12}^{**}_{o} \\ \text{09}^{**}_{d} , & \text{11}^{**}_{o} \\ & \text{08}^{\#}_{o} \end{array}$				
General empathy	13 <sup>*</sup> <sub>o</sub>		.22*	31*	.28*	
Psychological distress		$.16^{*}_{d}$ , $.14^{*}_{o}$				
Acceptance of prejudices				.54*		48*
Awareness Criminal liability Psychosomatic consequences				13 <sup>**</sup> 30 <sup>*</sup>		.24*
Behavior of the oldest sibling	$.33^{*}_{d}$ , $.40^{*}_{o}$					
Behavior of the most important sibling	$.19^{*}_{d}$ , $.29^{*}_{o}$					
Number of siblings		.11***				
Number of male siblings		.13***				

**Table 6**. Overview of the obtained significant correlations between the factors and cyberbullying, victimization, and bystanders' behavior

Note.

significant at p < .01

\*\* significant at p < .05

# significant at p < .10</p>

**Birth order.** All analyses of the hypotheses relating to *birth order* have been conducted by means of analysis of variance. No significant difference between the groups *youngest child*, *middle child*, and *oldest child* in terms of becoming a cyberbully has been found ( $F_d$  (2, 333) = .60, *n.s.* and  $F_o$  (2,333) = 1.35, *n.s.*) which leads to the rejection of hypothesis 71. In contrast to that, hypothesis 72 (There is a significant difference in terms of becoming a victim of cyberbullying depending on birth order) can be confirmed based on the ordinal victimization scale (F (2, 333) = 3.17, p < .05). By means of the Bonferroni test, it can be assumed that the difference lies between the group of middle children and the group of oldest children. Finally, there is no evidence for a significant difference between the groups youngest child, middle child, and oldest child in terms of becoming an intervening bystander (F (2, 95) = 1.08, *n.s.*) which entails the rejection of hypothesis 73.

**Research question 2.** As noted above, there is a significant difference between German and Dutch school children in terms of cyberbullying and victimization, which was assessed by means of the independent t-test. Based on this finding, it was of interest to determine which factors may have influenced this difference. Analysis by means of the independent t-test yielded the following outcomes. With reference to the two theoretical frameworks *TPB* and *FRIS*, it can be assumed that Germans scored significantly lower on attitudes (t (384) = 2.83, p < .01, *see* Table 7) and marginally lower on normative beliefs (t (384) = 1.77, p < .10, *see* Table 7), but higher on the perceived likelihood of the risk to occur (t (384) = -3.29, p < .01, *see* Table 7). While Dutch school children spend significantly more time per day in the internet (t (384) = 2.13, p < .05, *see* Table 7), German school children visit social network sites more frequently than their Dutch counterparts (t (384) = -1.89, p < .10, *see* Table 7). Other than that, statistical analysis did not yield any significant differences.

	n	Cyberbully <sup>1</sup>	Victim <sup>1</sup>	Attitudes towards cyberbullying <sup>2</sup>	Normative beliefs <sup>2</sup>	Risk perception (likelihood) <sup>3</sup>	Online hours/ day <sup>4</sup>	Visiting social network sites <sup>5</sup>
		Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
German	204	1.15 (.36)	1.08 (.28)	1.72 (.64)	1.83 (.70)	2.37 (.86)	2.11 (.82)	1.38 (.49)
Dutch	182	1.08 (.28)	1.03 (.16)	1.91 (.65)	1.94 (.59)	2.09 (.81)	2.29 (.81)	1.29 (.46)
Mean difference		.07**	.05**	.19*	.11#	.28*	.18**	.09#

 Table 7. Significant differences between German and Dutch school children (RQ 2)

Note. *N* = 386

<sup>1</sup> Answers were recoded into 1 (non-cyberbully/non-victim) and 2 (cyberbully/victim). The values represent the mean sum scores of only children and children with siblings, respectively; higher scores indicate a higher rate of cyberbullies/ victims.

a

 $^2$  Scales ranging from 1 to 5. Higher scores indicate a more positive (expected) attitude towards cyberbullying

 $^3$  Scales ranging from 1 to 5; higher scores indicate a higher perceived likelihood of cyberbullying to occur

 $^4$  Scales ranging from 1 to 4; higher scores indicate more hours spent online per day

<sup>5</sup> Answers were recoded into 1 (others) and 2 (social network sites). The values represent the mean sum scores of German and Dutch school children, respectively; higher scores indicate a higher rate of visiting social network sites.

\* significant at p < .01

\*\* significant at p < .05

# significant at p < .10

#### **Conclusion and Discussion**

The goal of the present study was to broaden the current understanding of the phenomenon *cyberbullying* by assessing factors that could prove relevant and useful in terms of creating and implementing successful preventions and interventions against cyberbullying. Aside from these factors that primarily derive from TPB and FRIS, the main contribution of the present study was to determine the influence of siblings on involvement in cyberbullying. Finally, an additional goal was to compare the cyberbullying experiences of Dutch and German school children and to make an attempt to account for potential differences. According to these aims, the hypotheses and research questions were formulated and statistically tested, which yielded the following *significant* outcomes.

*Attitude* regarding cyberbullying has a highly significant and positive correlation with cyberbullying and a marginal and negative one with providing help as bystander.

Normative beliefs show a highly significant positive correlation with cyberbullying.

Both *specific* and *general self-efficacy* correlate positively with providing help as bystander. Non-intervening bystanders scored significantly lower on specific self-efficacy than intervening bystanders. Additionally, levels of general self-efficacy were significantly lower in non-intervening bystanders than in intervening bystanders. A marginally significant difference has been found between victims and non-victims in terms of general self-efficacy, with victims scoring lower than non-victims.

*Risk perception* regarding the perceived *outcome severity* is significantly higher in victims than in cyberbullies and lower in intervening than in non-intervening bystanders. In terms of the perceived *likelihood*, there is statistical evidence for a significant difference between victims and cyberbullies, with victims scoring higher than cyberbullies. *Affect* as response to the risk was higher in victims than in cyberbullies, as well.

Feelings of *involvement* were found to be both negatively correlated with cyberbullying and to be positively correlated with providing help as bystander.

*General self-esteem* and *self-liking* are negatively associated with becoming a victim, whereas *self-competence* and victimization are also negatively but only marginally correlated. These three factors are positively related to cyberbullying, with a highly significant correlation in terms of general self-esteem. Victims seem to have significantly lower levels of general self-esteem and self-liking than non- victims. In addition to that, linear regression analysis indicated

that all three factors are strong to marginal predictors of cyberbullying, but only general selfesteem and self-liking predict victimization. With reference to the first research question, it can be assumed that cyberbullies scored significantly higher on all three factors than non-cyberbullies. There was no significant association relating to (intervening) bystanders at all.

*General empathy* has a negative and highly significant correlation with attitude regarding cyberbullying. The psychological factor is negatively correlated with cyberbullying and positively with intervening as bystander, with both relations being highly significant. Besides, it can be assumed that general empathy predicts feelings of involvement. Finally, it has been found that intervening bystanders have higher levels of general empathy than non-intervening bystanders.

There is a positive correlation between levels of *psychological distress* and becoming a victim. As a result, victims have greater problems with psychological distress than non-victims. They also score higher on this factor than cyberbullies.

*Acceptance of prejudices* is positively correlated with attitudes regarding cyberbullying and is negatively associated with general empathy, a correlation which is highly significant. Cyberbullies show significantly higher levels of acceptance of prejudices than non-cyberbullies.

Awareness of both *criminal liability* and *psychosomatic consequences* are negatively associated with attitudes towards cyberbullying. In addition to that, awareness of psychosomatic consequences shows a positive and highly significant correlation with general empathy. While cyberbullies score significantly higher on awareness of criminal liability, they are significantly less aware of the psychosomatic consequences of cyberbullying than non-cyberbullies.

In terms of the role siblings play in the cyberbullying context, the following significant results were obtained. While there was, against expectations, no effect of *sibling relationship quality*, we found highly significant positive correlations between the *behavior of the oldest* respectively *the most important sibling* and cyberbullying. These two factors are additionally strong predictors of cyberbullying.

The only significant correlation between *number of siblings* and the dependent variables was a positive one with becoming a victim. In addition to that, victimization was also positively related to the *number of male siblings*, whereas there was no significance in terms of *number of female siblings* at all.

For *birth order*, the only significant difference exists between the groups of oldest and middle children in terms of victimization.

With reference to the second research question, it can be assumed that German school children become cyberbullies and victims significantly more often than Dutch school children. These outcomes may be related to the findings that Germans scored significantly higher on the perceived likelihood of cyberbullying to occur, lower on attitudes towards cyberbullying and marginally lower on normative beliefs. The latter two tendencies mean that German school children find pro-cyberbullying behavior worse than Dutch school children do, and also believe that their peers think similarly. Even though these outcomes provide somewhat insight, they cannot be understood as causes of the higher rate of cyberbullies and victims among German school children spend less time on the internet than their Dutch counterparts. However, when they are online, German school children spend significantly more time visiting social network sites, which is a finding that may be considered as an antecedent of the higher cyberbully- and victimization- rates since this remarkably enhances both the number of opportunities to bully online and the chances to be exposed to cyberbullying.

Recapitulating, the factors related to *cyberbullying* are attitude towards cyberbullying, normative beliefs, feelings of involvement, self-esteem, self-liking, self-competence, general empathy, acceptance of prejudices, awareness of criminal liability and psychosomatic consequences and the cyberbullying behavior by the oldest respectively most important sibling. *Victimization* is associated with general self-efficacy, all three facets of risk perception, self-esteem, self-liking, self-competence, psychological distress, number of siblings, number of male siblings and birth order. Finally, there is a relation between *providing help as bystander* and the factors attitude towards cyberbullying, specific and general self-efficacy, feelings of involvement, and general empathy (*for an overview see* Table 8).

	Cyberbullying	Victimization	Bystanders' behavior
Attitude towards cyberbullying	х		х
Normative beliefs	x		
General self-efficacy		х	х
Specific self-efficacy			Х
Risk perception			
Severity		Х	Х
Likelihood Affect		Х	
Affect		Х	
Involvement	х		Х
Self-esteem	х	х	
Self-liking	х	Х	
Self-competence	Х	Х	
General empathy	х		х
Psychological distress		х	
Acceptance of prejudices	х		
Awareness			
Criminal liability	х		
Psychosomatic consequences	х		
Behavior of the oldest sibling	х		
Behavior of the most important sibling	x		
Number of siblings		х	
Number of male siblings		х	
Birth order		х	

Table 8. Factors that were found to be related to cyberbullying, victimization, and bystanders' behavior

Note. x indicates a significant association between the variables

Although the study yielded relevant and interesting findings that offer indications for certain tendencies in the cyberbullying context and suggestions for practical application, caution is required in terms of the significance and external validity of the outcomes. The small absolute number of cyberbullies, victims and intervening bystanders qualifies any conclusions in terms of the relative importance of the independent variables.

Despite these reservations, the majority of outcomes obtained in this study is in line with literature findings. This holds true for most findings relating to the central cognitive and psychological variables. Regarding the former, normative beliefs proved to be relevant,

especially since this relevance suggests that peers play an important role regarding cyberbullying, which can be seen as risk factor (cf. Dowdney, 1993; Whitted & Dupper, 2005) but also as useful finding for potential pre- and interventions. Regarding psychological variables, general empathy proved to be a central factor in the cyberbullying context. Among others, it may account for the finding of the present study that female school children are more likely to become what has previously been called bystanders-who-are-part-of-the-solution when witnessing incidents of cyberbullying, since previous research indicates that levels of empathy are higher in girls than in boys (Endresen & Olweus, 2001). This explanation can be further substantiated by another outcome of the present study which is also in line with literature and says that general empathy is positively correlated with bystanders' behavior. Also, tendencies concerning the extent of factors being present in cyberbullies, victims, or bystanders such as lower levels of self-esteem in victims than in non-victims were conform to previous research. However, while the relative number of cyberbullies and victims in the present sample was fairly in accordance with literature, the relative number of bystanders was lower and the relative number of those who intervened was higher than previously reported. These deviations could simply be due to different characteristics of the compared samples, yet it is the question to which extent the methods and definitions of the examined factors were comparable. This general problem in research on cyberbullying has already been addressed by Schrock and Boyd (2008) and needs to be solved in order to be able to make more sound universal conclusions in this context. Consistent definitions of the parties involved in and affected by cyberbullying and a homogenous time frame as inclusion criterion of cyberbullying incidents seem beneficial. Another noteworthy deviation from literature is that in the present study only about two victims out of ten indicated that they did not talk with others about their experience at all, while in a previous study about 30 to 40% did not tell anyone (Smith et al., 2006, Smith et al. 2008). In this context, a methodological cause could be that the study by Smith and colleagues (2006) is not representative itself with only 92 participants, while the 2008 study comprised a larger sample, but it is possible that the comparability with the sample of the present study was rather low due to distribution of age and ethnicity. An explanation with regard content could be that fairly recent large-scale European media campaigns to (http://www.keepcontrol.eu), which aimed at sensitizing their users regarding cyberbullying and online safety, achieved to (partly) remove the taboos from this topic. This and the presence of this topic in the media may recently have come to fruition and decreased victims' inhibitions to talk about it.

Based on literature, the author of the present study expected self-esteem to play a central role in cyberbullies, victims, and bystanders and that self-efficacy would be of importance for both victims and bystanders (see section Victims, cyberbullies, and bystanders). The fact that the findings in the present study are in line with these expectations, makes it even more astonishing that these two factors do not play a role in terms of the second research question at all. Although it was observed that, in this specific context, cognitive factors generally seem to be more critical than affective-psychological factors (maybe except for risk perception, whereas *likelihood* also reflects a cognitive component), this does not explain the lack of significance of self-esteem and self-efficacy. Perhaps, an explanation can be found in the cultural background as Germans are commonly known as rather rational people (cf. Nees, 2000). However, this attempt of an account is only based on common sense and strongly requires scientific substantiation. Another finding that looks inconsequent regarding the second research question is that German school children, who scored significantly higher on cyberbullying than Dutch pupils, scored significantly lower on attitudes towards cyberbullying. The low scores imply that they tend to reject pro-cyberbullying behavior. However, in previous research and in the present study, the association between attitudes and cyberbullying behavior was repeatedly found to be positive. Therefore, it was expected that attitudes among German pupils would be stronger in favor of cyberbullying than that of the Dutch pupils, yet the opposite was true. An explanation for this inconsistency may be looked for in the statistical context. When dividing the national groups back into those pupils who cyberbully and those who do not cyberbully, it is found that the large majority of German school children, i.e. those that do not cyberbully, generally show remarkably lower scores on attitude than their Dutch counterparts, who do not tend to reject pro-cyberbullying behavior that strongly. Thus, the large majority of German non-bullies is likely to have decreased the mean score regarding attitude towards cyberbullying.

As expected, psychological distress was significantly associated with victimization. The remarkable finding was that psychological distress does not play a role in cyberbullies. In combination with the reportedly high levels of self-esteem, self-liking, and self-competence, this provides support for the thesis that cyberbullies are rather confident individuals who are at peace with what they do instead of being victims of social circumstances themselves (cf. section *Victims, cyberbullies, and bystanders*, p.14). The fact that they report to be aware of the criminal liability of their behavior indicates that they act consciously and calculating so that they can harass their victims, yet in a way they will not get caught. The assumption of the cyberbully as

dominant character does not eliminate the notion that cyberbullies lack social skills (cf. Bolton & Graeve, 2005) which has actually been implied by the lower levels of empathy in cyberbullies found in the present study. However, in the above-described context, this lack may even be helpful as it fosters emotional detachment from their victims.

Aside from the examination of the already elaborated factors and questions, the present study could make two noteworthy contributions to the field of research on cyberbullying. First, and most importantly, putting a focus on the examination of the role that siblings play in the cyberbullying context is the main contribution of this study as this has not been done before to this extent. While the assessed association between family size and victimization was in accordance with previous research (see section Siblings) this did not hold true for the relation with cyberbullying. Thus, the higher the number of siblings, the higher the risk of becoming a victim of cyberbullying. The aforementioned literature that mentions lower levels of caring and less emotional devotion among male siblings (cf. Scharf, Shulman, & Avigad-Spitz, 2005; Cole & Kerns, 2001) and a correlation between unsatisfactory relationships with peers, parents, or siblings and victimization (Wong, Lok, Lo, & Ma, 2007) could provide an explanation for the positive association between the number of *male* siblings and victimization as found in the present study. Thus, a high number of male siblings may entail rather insecure bonds and a lower degree of connectedness among the siblings, which may negatively influence the siblings' selfesteem whereby they become convenient victims for cyberbullies (cf. Egan & Perry, 1998). Therefore, the present study implies that a higher number of male siblings is also a risk factor of becoming a victim. However, as female relationships are rather described in terms of positive bonds and emotional and social sharing (see section Siblings), the question remains why the number of female siblings does not work as protective factor in this context. In addition, birth order has also been found to be related to victimization, but this seems to be solely relevant for the groups of middle and oldest siblings. Why the youngest siblings are not affected in this context merits further examination. Thus, assumptions about the risk or protective function of birth order are too premature at this point. Regarding siblings' influence, another interesting finding was the highly significant association between the cyberbullying behavior of the oldest respectively most important sibling and cyberbullying behavior by their (younger) sibling. Two possible accounts for this relation are not far from seek. Both approaches consider the oldest and most important sibling, who can, as a matter of course, be the same person, to be role models whose behavior is a standard to the (younger) sibling. For one thing, this could have a disinhibiting effect on the (younger) sibling as they learn that cyberbullying cannot be too reprehensible if their role model performs it. For another thing, (younger) siblings may use cyberbullying as instrument to gain rewards like a higher status, and therefore increased acknowledgement and power, granted by their cyberbullying oldest respectively most important sibling. Of course, this latter process can be a result of the first one and is closely related to social learning (Bandura & Ribes-Inesta, 1976; cf. Siegel, 1992). Therefore, depending on their behavior, oldest respectively most important siblings can act as both risk and protective factors.

Second, a study that contains a direct and quantitative comparison of factors related to and experience concerning cyberbullying between German and Dutch school children is, to the author's awareness, unique in the recent field of research on cyberbullying. Such a comparison between countries that are geographically close and culturally not that far apart, can offer a basis for intensified exchange and cooperation regarding this topic, e.g. comparing the benefits of school-related measures against cyberbullying established in the neighboring country. In this context, as the present study provides support for the assumption that there are differences in cyberbullying based on nationality or culture context (*see* section *Statistics and prevalence*, p.8), these findings can be used for subsequent research.

Although the present study put forth a considerable number of contributions to the field of research on cyberbullying, future research is necessary due to the following issues. As the present study yielded an expandable number of indications regarding siblings' influence, it seems worth it to repeat and extend this study based on a larger sample size in order to obtain higher absolute numbers and to generally answer the central question whether siblings are risk or protective factors in the cyberbullying context. Of course, this modification could significantly enhance the validity of *all* results and would also entail more insight into the extent to which the other examined factors are relevant. By design, this study exclusively yielded correlational findings. Although presumptions were made based on regression analysis, experimental studies are absolutely essential in order to draw sound causal conclusions. Such conclusion could be useful for the actual design of pre- and interventions against cyberbulling. In this context and with regard to content, it seems interesting to examine whether older and most important siblings are also influential in terms of victimization and providing help as bystander. In addition, it seems worth it that subsequent research on cyberbullying picks up on the factor sibling relationship quality again, as this factor cannot be completely rejected based on a single study, especially since literature actually implies great potential.

## **Practical implications**

Based on the findings summed up in the previous section, a number of approaches against cyberbullying are discussed for each of the relevant three groups involved. Among others, the factors deriving from the TPB and FRIS turned out to be valuable in this context. Regarding the findings concerning siblings' influence, it will be considered which adolescents may require special attention, especially in terms of prevention.

To begin with, it seems highly reasonable to initiate interventions that are supposed to aim at school children in their respective school for the following reasons. As elaborated on in the beginning, the school is the place where adolescents spend a significant amount of time, many cyberbullies are considered to be fellow school children or classmates, and a number of cyberbullying incidents has been found to have its origin in school (bullying). In addition to that, the school environment is easier to modify than other influential environments (e.g. family) as core values and rules can be easier established and are more likely to be seen as formally binding when officially approved. However, considering the fact that only a minority of the participants of the present study knew whether their school has adopted measures against cyberbullying an effective communication about the established measures is equally essential. As elaborated on before, changes in the environment can indirectly influence subjective norms, which is an important factor in both TPB and FRIS and an antecedent of behavior. Aside from that, there is the aforementioned finding that school environment can directly contribute to successful education in the bullying context if its school children perceive it to be supportive and involved and feel attached to it (Pellegrini & Bartini, 2000).

First, approaches against cyberbullying are discussed, with the prerequisite that the cyberbullies could be identified. Like the present study implies, cyberbullies are well aware of the criminal liability that can be entailed by cyberbullying. Therefore, it can be expected that threatening with or simply emphasizing this aspect in educational or other interventional campaigns will not have the desired deterring effect. Considering the other (inter)related factors, at first sight, it seems to be an option to enhance general empathy by means of educational approaches about (dissolving) prejudices and the psychosomatic (long-term) consequences for the victim. This would theoretically have two effects. For one thing, a decrease in the potential emotional detachment from the victim, as a result of the high acceptance of prejudices and low awareness of psychosomatic consequences, can be achieved and may hamper the cyberbully to

proceed with the harassment. For another thing, changes in general empathy can influence the cyberbully's attitude towards cyberbullying in a positive manner, which, in turn, would lead to a decrease in cyberbullying behavior (*see* TPB). However, according to the findings of the present study, cyberbullies seem to be very confident and self-assured persons, an assumption that corresponds to observations made by Bolton and Graeve (2005) who do not see bullies as weak victims but as having a dominant personality and simply desire to stay in power by humiliating others. This finding and the outcome that normative beliefs play an essential role since cyberbullies are convinced that they have their peers' support make this educational approach less promising as disinterest and indifference from the part of the cyberbully can be expected.

In this context, an additional obstacle is that it is likely that cyberbullies do not feel guilty as they may have learned this kind of behavior from their older or respectively most important sibling. Thus, they can actually be sure of their approval, as well. Due to that, older respectively most important siblings can be seen as risk factors in terms of cyberbullying. On the other hand, these siblings can also be protective influences if they do not cyberbully at all. Therefore, it seems reasonable to consider approaching them and to emphasize their responsibility for their siblings due to their obviously influential status. If these influential siblings and the cyberbully's peers are willing to show their disapproval of the cyberbully's behavior, the aforementioned notion of *reintegrative shaming* seems to be an option (see section *Recommended approaches and related factors*, p.18).

Second, helping victims by means of providing support to improve their situation is another focal point in the battle against cyberbullying. As the results of the present study indicate, victims suffer from negative affect, high risk perception, and little trust in and appreciation of themselves and their abilities, with the latter being a strong predictor of victimization as described previously. The most obvious key word in this context is *empowerment*, which can work in two ways. First, even though the large majority of victims in this study reported to have talked with others about their experience, there is still the need to help those who do not dare to. Therefore, the intervention would have to aim at empowering these victims to approach people that can help in practical but also comforting ways. Second, empowerment can also be achieved by providing online safety strategies as these means can positively influence the perceived *Wehrbarkeit* (capability of self-help) of the victim. Both ways result in enhanced levels of selfefficacy and self-esteem. As victims have been described as dependent on the internet (Vandebosch, Van Cleemput, Mortelmans, & Walrave 2006; Van den Eijnde, Vermulst, van Rooij, & Meerkerk 2006) and as trusting their (online) friends while feeling too ashamed to confide their experiences to adults who they additionally expect to trivialize their reports, it seems promising to consider an approach by McKenna and Bargh (1998), although this original approach is not directly linked to cyberbullying. Their research, which is based on the Social identity theory (cf. Tajfel, 1982), a theory addressing the phenomenon of group-based social interactions, proceeds from the assumption that "Internet newsgroups allow individuals to interact with others in a relatively anonymous fashion and thereby provide individuals with concealable stigmatized identities a place to belong [...]" (p.681). The researchers found that newsgroup participation of gay users led to an increase in identity importance which, in turn, resulted in greater self-acceptance and finally to a "coming out about the secret identity to family and friends" (p.681). Obviously, homosexuality and being a victim of cyberbullying are on different levels in most regards. However, considering these gay users, some overlap seems to exist in dealing with the situation as many victims of cyberbullies treat their victimization exactly as a "concealable stigmatized identity" by not talking about it. The motives for this concealment, shame or fear of the (social) consequences, seem to be relevant in both groups, as well. Therefore, it seems appropriate to consider that this way of exchange may also be effective in empowering victims to speak about the harassment, especially since research indicates that processes of social comparison can promote self-efficacy beliefs (Bandura, 1997). Furthermore, it has been found that realizing that others feel the same way and have the same experiences facilitates an increase in self-esteem or "self-acceptance" (McKenna & Bargh, 1998). Thus, since the approach by McKenna and Bargh resulted in enhanced self-esteem, it seems more than worth it to consider tailoring this procedure to victims of cyberbullying. Such an online forum could be reached via a familiar website such as the school's homepage. After having made this first step of empowerment that enables victims to talk to and approach others, the next step could be to provide the aforementioned online safety strategies.

Aside from the already mentioned factors, the present study indicates that the number of (male) siblings also seems to be a risk factor in becoming a victim of cyberbullying. Thus, the smaller the family size, the less likely are school children to be cyberbullied. While this is difficult to be considered in an intervention as this factor is not modifiable, it could be useful in terms of prevention, i.e. to offer self-esteem and self-efficacy enhancing programs especially to school children with a notably high number of (male) siblings.

Third, in terms of bystanders, it seems beneficial to concentrate on both those who already provide help and bystanders who have not intervened yet. Based on the findings of the present study, the likelihood to deny victims help is related to low levels of specific and general selfefficacy and to tendentially higher levels of risk perception concerning the perceived severity of the consequences of cyberbullying. The latter finding may imply that non-intervening bystanders do not act since they consider cyberbullying to be a enormous threat and are too anxious to chance that they become the cyberbully's target themselves. Empowerment of these bystanders in order to enhance levels of self-efficacy seems to be a logical step. As getting directly involved in the situation may enhance feelings of responsibility and therefore the likelihood to help, it can be considered to actually enhance feelings of involvement (even more in already intervening bystanders). This can generally be achieved via enhancement of empathy as suggested above, but it can also be enhanced more specifically in the immediate context of cyberbullying as research on computer-mediated communication implies (Markey, 2000). The findings indicate that "the bystander effect was virtually eliminated and help was received more quickly when specific individuals were asked for help by using their screen name", (p. 183). Thus, bystander interventions in online chat communities were assumed to have similar properties as interactions that take place offline, i.e. when addressing a bystander directly, receiving help is more likely. However, the design of the study does not include highly emotional conditions and it has to be kept in mind that the more emotionally charged the situation, the more powerful the bystander effect (Piliavin & Piliavin, 1972). Thus, in terms of extreme online bullying, this could manifest itself as an obstacle for the bystander to give assistance, be it offline or online. Despite this reservation, it seems reasonable to conduct research that actually tests the applicability of this finding to cyberbullying. If the results are as desired, an option for practical application could be to design a list with advice of how to protect against cyberbullying and how to react if one becomes a victim. One piece of advice could then be to directly address other people that are present in the chat room in order to ask for help.

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# APPENDIX

Lieber Teilnehmer, liebe Teilnehmerin,

vielen Dank für deine Mitarbeit an meiner Untersuchung!

Mit Hilfe des folgenden Fragebogens möchte ich mehr über Internetmobbing in Schulen herausfinden. Das Beantworten der Fragen wird maximal 30 Minuten dauern.

Bevor du gleich mit dem Ausfüllen des Fragebogens beginnst, wirst du eine Definition des Wortes Internetmobbing lesen.

Die folgenden fünf Punkte sind sehr wichtig für dich und diese Untersuchung:

(1) Alle Antworten, die du in dieser Untersuchung gibst, werden absolut ANONYM und VERTRAULICH durch mich weiterverarbeitet. Du kannst dir also sicher sein, dass weder deine Lehrer, noch deine Eltern, deine Mitschüler oder jemand anderes jemals erfahren, was du für Antworten gegeben hast.

(2) Es ist sehr wichtig, dass du alle Fragen EHRLICH beantwortest. Suche dir deshalb immer die Antwortmöglichkeit aus, die am ehesten auf dich und deine Situation zutrifft.

(3) Es ist sehr wichtig, dass du während und nach der Beantwortung der Fragen LEISE bist und still sitzen bleibst, damit du dich und die anderen sich bestmöglich konzentrieren können.

(4) Es ist auch sehr wichtig, dass du den ganzen Tag nicht mit deinen Mitschülern über den INHALT des Fragebogens und über deine Antworten redest. Das kann nämlich die Antworten deiner Mitschüler beinflussen, die den Fragebogen noch ausfüllen müssen. Dadurch würde meine Untersuchung weniger gut werden.

(5) Es ist außerdem sehr wichtig, dass du weißt, was in dieser Untersuchung mit dem Wort INTERNETMOBBING gemeint ist. Lies dir die DEFINITION also sorgfältig durch, sodass du weißt, was Internetmobbing beinhält.

Du kannst nun die Untersuchung beginnen. Lies dir die Definition von Internetmobbing GUT durch, bevor du mit dem Ausfüllen des Fragebogens beginnst.

Viel Erfolg!

Unter INTERNETMOBBING verstehen wir, dass eine Person oder eine Gruppe eine andere Person mindestens einmal...

im INTERNET (z.B. beim Chatten bei ICQ, in sozialen Netzwerken wie Schülervz.net, in Emails, auf Websites, durch Filme auf Youtube.com zu stellen usw.)

oder mit Hilfe von HANDYS (z.B. in SMS, durch Anrufe, durch Handyfotos und -filme usw.)

SCHLECHT BEHANDELT (z.B. beleidigt, beschimpft, bedroht, einschüchtert, sie lächerlich macht, Gerüchte über die Person in die Welt setzt oder sie aus einer Gruppe ausschließt).

Bist	du ein Junge oder ein Mädchen? Bitte kreuze an.
0	Junge Mädchen
Wie	alt bist du? Gib bitte dein Alter an.
Welc	che Nationalität besitzt du? Bitte kreuze an.
Q	Deutsch
0	Eine andere,
näml	ich:
	viele Stunden am Tag verbringst du im Internet? kreuze nur die Antwort an, die am ehesten zutrifft.
Q	0-1 Stunden
0	1-3 Stunde(n)
Q	3-6 Stunden
0	mehr als 6 Stunden
	machst du hauptsächlich im Internet? kreuze nur die Antwort an, die am ehesten zutrifft.
Q	Hausaufgaben und andere Aufträge für die Schule
0	Chatten
0	Soziale Netzwerke besuchen (z.B. Schülervz.net, Facebook.com,)
Q	Ich mache hauptsächlich etwas anderes,

nämlich:

Besitzt du ein eigenes Handy? Bitte kreuze an.



Wie oft benutzt du dein Handy? Bitte kreuze nur die Antwort an, die am ehesten zutrifft.

O	Nie
O	Selten
O	Manchmal
O	Oft
O	Täglich

Benutzt du dein Handy auch in der Schule? Bitte kreuze an.



Wurdest du in den letzten 2 Monaten im Internet und/oder per Handy gemobbt? Bitte kreuze nur die Antwort an, die am ehesten zutrifft.

Ja, insgesamt ein- bis zweimal
 Ja, zwei- bis dreimal pro Monat
 Ja, einmal pro Woche
 Ja, mehr als einmal pro Woche
 Nein, gar nicht

Du hast gerade angegeben, dass du schon einmal im Internet und/oder per Handy gemobbt wurdest.

Kannst du bitte in einem Satz kurz beschreiben, was dir genau passiert ist (z.B. dass du eine gemeine SMS bekommen hast, beim Chatten beleidigt wurdest usw.)?

Weißt du wer die Person war, die dich im Internet und/oder per Handy gemobbt hat? Hier kannst du mehrere Antworten ankreuzen.

Ja, ein Freund/eine Freundin
Ja, ein Mitschüler
Ja, meine Geschwister
Ja, jemand, den ich nicht persönlich kenne
Ja, jemand anderes
Nein, das weiß ich nicht

Hast du mit jemandem über deine Erfahrung gesprochen, nachdem du im Internet und/oder per Handy gemobbt wurdest? Hier kannst du mehrere Antworten ankreuzen.

Ja, mit einem Freund/ einer Freundin
Ja, mit meinen Eltern
Ja, mit einem Lehrer/ einer Lehrerin
Ja, mit Freunden oder Bekannten aus dem Internet
Ja, mit jemand anderem
Nein, mit niemandem

Hattest du das Gefühl, dass die Person, mit der du über deine Erfahrung gesprochen hast, dein Problem ernst genommen hat? Bitte kreuze nur die Antwort an, die am ehesten zutrifft.

Ja, völlig
 Eher ja
 Nein, eher nicht
 Nein, überhaupt nicht
 Weiß ich nicht

Hast du selber in den letzten 2 Monaten andere im Internet und/oder per Handy gemobbt? Bitte kreuze nur die Antwort an, die am ehesten zutrifft.

Q	Ja, insgesamt ein- bis zweimal
O	Ja, zwei- bis dreimal pro Monat
O	Ja, einmal pro Woche
O	Ja, mehr als einmal pro Woche
Q	Nein, gar nicht

Hast du in den letzten 2 Monaten mitbekommen, dass jemand im Internet und/oder per Handy gemobbt wurde? Bitte kreuze nur die Antwort an, die am ehesten zutrifft.

Ja, insgesamt ein- bis zweimal
 Ja, zwei- bis dreimal pro Monat
 Ja, einmal pro Woche
 Ja, mehr als einmal pro Woche
 Nein, gar nicht

### Hast du eingegriffen und der Person geholfen, als du mitbekommen hast, dass sie gemobbt wird? Hier kannst du mehrere Antworten ankreuzen.

	Ja, ich bin direkt dazwischen gegangen
	Ja, ich habe der Person zukünftig meine Hilfe angeboten, falls es noch einmal passiert
	Ja, ich habe den Täter überzeugt, die Person in Ruhe zu lassen
	Ja, ich habe mich an andere gewendet, die besser helfen können (z.B. Lehrer, Eltern, Mitschüler,)
	Nein, ich habe mich nicht getraut
	Nein, die Person hat es nicht anders verdient
	Nein, das geht mich nichts an
	Nein, aber aus anderen Gründen,
näml	ich:

### Weißt du, ob es an deiner Schule spezielle Regeln gegen Internetmobbing gibt? Bitte kreuze an.

🖸 Ja

Nein

Wie hast du von diesen Regeln erfahren? Hier kannst du mehrere Antworten ankreuzen.

	Im Unterricht
	Durch meine Mitschüler
	Durch meine Eltern
Γ	Im Internet
$\Box$	Anders,
näml	ich:

Würdest du dir wünschen, dass deine Schule solche Regeln aufstellt und Maßnahmen ergreift, wenn gegen sie verstoßen wird? Bitte kreuze nur die Antwort an, die am ehesten zutrifft.

Ja, fände ich gut
 Nein, das bringt doch sowieso nichts
 Nein, da sollte sich die Schule nicht einmischen
 Das ist mir eigentlich egal
 Weiß ich nicht

Welche Maßnahmen sollte die Schule deiner Meinung nach ergreifen, um die Schüler vor Internetmobbing zu schützen? Bitte kreuze nur die Antwort an, die du am besten findest.

$\sim$	Alle Schüler im Unterricht über die Gefahren von Internetmobbing informieren und erklären, wie man sich in solchen
	onen am besten verhält

Auf der Schulhomepage Informationen über die Gefahren von Internetmobbing geben und erklären, wie man sich in solchen Situationen am besten verhält (so kann sich jeder, den das Thema interessiert, selber informieren)

Vertrauenslehrer oder Vertrauensschüler einsetzen, die sich mit dem Thema Internetmobbing auskennen und an die sich Schüler immer persönlich oder anonym wenden können, wenn sie Fragen oder Sorgen hat (z.B. Briefe oder Emails schreiben)

Internetforen einrichten, die man über die Schulhomepage erreichen kann und in denen sich Schüler/innen, die von Internetmobbing betroffen sind, anonym über ihre Erfahrungen austauchen und gegenseitig helfen können

Strafen wie Schulverweise aussprechen oder die Täter gegebenenfalls sogar anzeigen

Gib bitte bei den folgenden Aussagen an inwiefern du ihnen zustimmst oder nicht zustimmst. Bitte kreuze bei jeder Aussage nur die Antwort an, die am ehesten zutrifft.

	stimme gar nicht zu	stimme eher nicht Zu	weder noch	stimme eher zu	stimme sehr zu
Ich kann selbst dazu beitragen Internetmobbing zu bekämpfen, indem ich den Mobber überzeuge aufzuhören.	C	E	C	C	C
Ich bin dazu in der Lage Opfer von Internetmobbing zu verteidigen.		E	C	E	C
Wenn ich sehe, dass jemand im Internet und/oder per Handy gemobbt wird, weiß ich, was ich tun muss.		E	E	5	C
Wenn ich selbst im Internet und/oder per Handy gemobbt werde, weiß ich was ich tun	6	B	C	6	6

Es folgen jetzt einige Aussagen darüber wie du ALLGEMEIN denkst und handelst.

Gib bitte an, inwiefern du den folgenden Aussagen zustimmst oder ihnen nicht zustimmst. Kreuze dafür bitte jeweils nur die Antwort an, die am besten auf dich zutrifft.

Es gibt hierbei keine falschen oder richtigen Antworten. Es geht nur um deine Meinung.

	(1) stimmt nicht	(2) stimmt kaum	(3) stimmt eher	(4) stimmt genau
Wenn sich Widerstände auftun, finde ich Mittel und Wege, mich durchzusetzen.	5	8	e	
Die Lösung schwieriger Probleme gelingt mir immer, wenn ich mich darum bemühe.	C	6	8	

muss.

Situationen weiß ich immer wie ich mich verhalten soll.	(1) stimmt nicht	(2) stimmt kaum	(3) stimmt eher	(4) stimmt genau
Schwierigkeiten sehe ich gelassen entgegen, weil ich meinen Fähigkeiten immer vertrauen kann.	6	E	C	E
Für jedes Problem kann ich eine Lösung finden.				

Kreuze bitte nur die Antwort an, die deiner Meinung nach jeweils am ehesten zutrifft.

	(1) überhaupt nicht ernst	(2) ein bißchen ernst	(3) einigermaßen ernst	(4) ziemlich ernst	(5) sehr ernst
Wie ernstzunehmend findest du Internetmobbing im Allgemeinen?	E	C	8	C	C
Wenn ich Ziel von Internetmobbing werde dann sind die Folgen fü mich		E		C	e
Der Einfluss von Internetmobbing auf das Leben von Jugendlichen ist	E	E	E	E	G
Die Tatsache, dass eine große Anzahl Jugendlicher mit Internetmobbing zu tur hat, erscheint mir…		E		C	E

Kreuze bitte nur die Antwort an, die deiner Meinung nach jeweils am ehesten zutrifft.

	sehr niedrig	relativ niedrig	weder niedrig, noch hoch	relativ hoch	sehr hoch
Wie hoch schätzt du die Wahrscheinlichkeit ein, dass in deiner direkten Umgebung (deiner Schule oder Klasse) Internetmobbing stattfindet?	C	C	E	E	
Wie hoch schätzt du die Wahrscheinlichkeit ein, dass du von Internetmobbing	0	e	C	8	C

Cyberbullying among German and Dutch adolescents 2010

betroffen sein könntest?	sehr niedrig	relativ niedrig	weder niedrig, noch hoch	relativ hoch	sehr hoch
Wie hoch schätzt du die Wahrscheinlichkeit ein, dass du durch Internetmobbing Schaden nimmst (z.B. dass du traurig bist, Angst hast zur Schule zu gehen usw.)?	C	C	E	C	E

Stell dir vor, dass du von Internetmobbing betroffen bist. Wie fühlst du dich dann?

Kreuze bitte nur die Antwort an, die jeweils am ehesten auf dich zutrifft.

	(1) überhaupt nicht	(2) ein bißchen	(3) einigermaßen	(4) ziemlich	(5) sehr stark
Angespannt					
Sicher				9	
Ängstlich				G	
Wütend				<b>S</b>	
Ruhig				9	
Besorgt				9	
Nervös				9	

Kreuze bitte nur die Antwort an, die jeweils am ehesten auf dich zutrifft

Ich interessiere mich	(1) überhaupt nicht	(2) ein bißchen	(3) einigermaßen	(4) ziemlich	(5) sehr stark
für die Folgen von Internetmobbing.		8	6	0	
Internetmobbing beeinflusst mein tägliches Leben.	C	C	C		
Dieses Risiko betrifft mich.		8	0	0	

Es folgen nun Aussagen darüber wie du ALLGEMEIN über dich selbst denkst. Gib bitte an inwiefern du den Aussagen zustimmst oder nicht zustimmst. Kreuze bei jeder Aussage nur die Antwort an, die am ehesten auf dich zutrifft.

	(1) stimme nicht zu	(2)	(3)	(4)	(5) stimme sehr zu
Ich neige dazu mich abzuwerten				9	

80

Ich erledige Dinge sehr	(1) stimme nicht zu	(2)	(3)	(4)	(5) stimme sehr zu
				<-/	(5) summe sent Zu
erfolgreich					9
Ich fühle mich wohl so wie ich bin				Ξ.	9
Was ich anpacke, gelingt mir fast immer Ich bin mir sicher, dass	8	<b>e</b>	6		
ich ein wertvoller Mensch bin.		9			
Manchmal ist es unangenehm für mich über mich selbst nachzudenken	6	÷	E	C	6
Ich habe mir gegenüber eine negative Haltung		0			8
Ich finde es manchmal schwierig die Dinge zu erreichen, die wichtig für mich sind.	S	C	E	C	G
Ich finde mich toll, so wie ich bin		•		Ċ,	C
Manchmal kann ich schlecht mit Herausforderungen umgehen	E	C	E	C	E
Ich bezweifele niemals, dass ich ein wertvoller					
Mensch bin		0		•	
Ich kann viele Dinge sehr gut					9
Manchmal schaffe ich es nicht meine Ziele zu erreichen	C	G			G
Ich habe viele Talente	8	8		8	
Ich respektiere mich selber nicht genug		9		G	8
Ich wünschte, dass ich bei manchen Tätigkeiten geschickter wäre	E	C	E	C	E

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Stell dir vor, dass sich eine Person aus eurer Gruppe von Freunden so verhalten würde wie es in den Sätzen unten links beschrieben wird. DU könntest das Verhalten dieser Person als "sehr schlecht", "schlecht", "weder schlecht, noch gut", "gut" oder "sehr gut" beurteilen.

Es geht nun darum wie DU das Verhalten dieser Person beurteilen würdest.

Kreuze bitte bei jedem Satz an wie DU es finden würdest, wenn sich diese Person so verhält wie unten beschrieben.

	sehr schlecht	schlecht	weder schlecht, noch gut	gut	sehr gut
Diese Person fängt an im Internet zu mobben.	8	6	8	8	
Diese Person bringt andere dazı beim Internetmobbing mitzumachen.			C	C	8
Diese Person tröstet das Opfer hinterher.		C	0	8	
Diese Person findet immer neue Wege das Opfer im Internet und/oder per Handy zu schikanieren.	C	E	C	E	C
Diese Person droht anderen damit sie im Internet auszuschließen (z.B. bei Schülervznet).	C	E	C	C	C
Diese Person sendet gemeine Emails, SMS und macht gemeine Anrufe.	E	C	C	C	8
Diese Person erzählt einem Erwachsenen über das Internetmobbing.		C	C	8	e
Diese Person macht Handyfotos und erpresst das Opfer damit.	D	B	C	C	C
Diese Person versucht die anderen vom Internetmobbing abzuhalten.	C	E	C	C	C
Diese Person verbreitet Gerüchte über andere im Internet und per Handy.	C	C	C	C	C

Stell dir vor, dass sich eine Person aus eurer Gruppe von Freunden so verhalten würde wie es in den Sätzen unten links beschrieben wird. Deine anderen Freunde können das Verhalten dieser Person als "sehr schlecht", "schlecht", "weder schlecht, noch gut", "gut" oder "sehr gut" beurteilen.

Was denkst du wie DEINE FREUNDE das Verhalten dieser Person beurteilen würden?

Kreuze bitte bei jedem Satz an, wie es deine Freunde finden würden, wenn sich diese Person so verhält wie unten beschrieben.

	sehr schlecht	schlecht	weder schlecht, noch gut	gut	sehr gut
Diese Person fängt an im Internet zu mobben.	8		0		
Diese Person bringt andere dazı beim Internetmobbing mitzumachen.	E	e	C		C
Diese Person tröstet das Opfer hinterher.	0		e.		
Diese Person findet immer neue Wege das Opfer im Internet und/oder per Handy zu schikanieren.	C	E	E	B	C
Diese Person droht anderen damit sie im Internet auszuschließen (z.B. bei Schülervznet).	E	6	E	C	C
Diese Person sendet gemeine Emails, SMS und macht gemeine Anrufe.	e	8	C	C	C
Diese Person erzählt einem Erwachsenen über das Internetmobbing	e	e	C	E	C
Diese Person macht Handyfotos und erpresst das Opfer damit.		0		C	C
Diese Person versucht die anderen vom Internetmobbing abzuhalten.	E	e	C		C
Diese Person verbreitet Gerüchte über andere im Internet und per Handy.	E	C	C	C	C

Gib nun bitte an, wie sehr du den folgenden Aussagen jeweils zustimmst oder sie ablehnst.

Bitte kreuze jeweils nur die Antwort an, die deiner Meinung nach (tendenziell) am ehesten zutrifft.

	Lehne ich völlig ab			Weder noch	I		Stimme ich völlig zu
Internetmobbing unter Jugendlichen ist vollkommen normal.		C		C	C	0	0
Opfer von Internetmobbing zu werden, stärkt und festigt den Charakter.	8	8	8	C	8	B	8
Jugendliche, die im Internet gemobbt werden, haben es verdient.		C		C	C	C	C

Weißt du, ob Jugendliche, die andere im Internet und/ oder per Handy mobben dafür bei der Polizei angezeigt werden können?

Ja, da bin ich mir sehr sicher
 Ja, das könnte sein
 Nein, ich glaube eher nicht
 Nein, auf keinen Fall
 Keine Ahnung

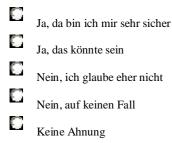
Denkst du, dass Internetmobbing zu seelischen oder körperlichen Problemen beim Opfer führen kann (z.B. Angst in die Schule zu gehen, Bauchschmerzen, schlechte Leistungen in der Schule usw.)?

Ja, da bin ich mir sehr sicher
 Ja, das könnte sein
 Nein, ich glaube eher nicht
 Nein, auf keinen Fall
 Keine Ahnung

Du hast gerade angegeben, dass du denkt, dass Internetmobbing zu seelischen oder körperlichen Problemen beim Opfer führen kann.

Gib bitte an, an welche emotionalen und körperlichen Folgen du konkret denkst. Gib hierfür bitte maximal zwei Beispiele.

Denkst du, dass Jugendliche, die im Internet und/oder per Handy gemobbt werden, sehr darunter leiden?



Es folgen jetzt eine Reihe Aussagen darüber wie du allgemein fühlst und handelst. Gib bitte an, ob die Aussagen jeweils auf dich zutreffen, indem du entweder " wahr" oder "falsch" ankreuzt. Es gibt keine objektiv richtigen oder falschen Antworten, es geht nur um deine persönliche Meinung und Erfahrung.

	Wahr	Falsch
Ich empfinde die Gefühle anderer nach.		0
Ich leide, wenn andere		
traurig und betrübt sind.		0
Ich verstehe Leute nicht, die sich emotional		-
verhalten.	8	
Das Unglück von anderen bewegt mich	<b>F</b> 7	<b>P</b> -1
sehr.	8	0
Die Probleme von anderen interessieren	8	C
mich nicht.	E	
Ich bin schnell zu Tränen gerührt.	8	0
Ich erlebe meine Gefühle intensiv.	8	0
Ich lasse meinen		
Gefühlen selten freien Lauf.		0
Ich fühle mich geistig mit anderen Menschen	8	G
verbunden.		

Gib bitte an, wie oft du dich in der LETZTEN WOCHE so gefühlt hast wie in den folgenden Sätzen beschrieben wird.

Bitte kreuze hierfür jeweils nur die Antwortmöglichkeit an, die am besten auf dich zutrifft. Hierbei entspricht "selten oder niemals" = weniger als 1 Tag, "manchmal" = 1-2 Tage, "öfters" = 3-4 Tage und "meistens oder die ganze Zeit" = 5-7 Tage.

	selten oder niemals	manchmal	öfters	meistens oder die ganze Zeit
Ich fühlte mich deprimiert.			0	
Ich fühlte mich einsam.				
Ich hatte (kurze) Tränenausbrüche.		9	9	e
Ich fühlte mich traurig.			0	

### Mit wie vielen Geschwistern bist du aufgewachsen?

Aufgewachsen bedeutet, dass ihr bis jetzt zusammen wohnt oder gewohnt habt und/oder sehr viel Kontakt miteinander habt/hattet (Halb- oder Stiefgeschwister können hier natürlich auch zugehören). Gib bitte jeweils die Anzahl an.

Brüder	
Schwestern	

Bist du das älteste oder das jüngste Kind zuhause? Kreuze nur die Antwort an, die auf dich zutrifft.

Q	Das älteste Kind
O	Das jüngste Kind
O	Weder das älteste noch das jüngste, ich bin in der Mitte
Q	Weder das älteste noch das jüngste, ich bin Einzelkind

Gib bitte an, ob das älteste Kind in deiner Familie ein Mädchen oder oder ein Junge ist.

Q	Mädchen
O	Junge

Gib bitte an, wie viele Jahre Altersunterschied zwischen dir und deinem ältesten Geschwisterkind liegen.

Hat dein ältestes Geschwisterkind schon einmal jemanden im Internet und/oder per Handy gemobbt? Bitte kreuze nur die Antwort an, die am ehesten zutrifft.

Ja, oft
 Ja, manchmal
 Ja, aber selten
 Ja, einmal
 Nein, noch nie
 Weiss ich nicht

 $\odot$ 

Q

Überlege dir, bevor du die folgenden Fragen beantwortest, wer für dich dein WICHTIGSTES GESCHWISTERKIND ist. Alle folgenden Fragen und Aussagen beziehen sich nämlich NUR auf dieses Geschwisterkind.

Du kannst hierbei natürlich auch an ein Halb- oder Stiefgeschwisterkind denken.

(Wenn du nur ein Geschwisterkind hast, dann denke bei den folgenden Fragen immer an dieses Geschwisterkind)

Gib nun zuerst an, ob dieses Geschwisterkind gleichzeitig dein ältestes Geschwisterkind ist.

Ja, er/sie ist mein ältestes Geschwisterkind

Nein, er/sie ist nicht mein ältestes Geschwisterkind

Wie alt ist dieses Geschwisterkind? Gib bitte das Alter an.

Hat dieses Geschwisterkind schon einmal jemanden im Internet und/oder per Handy gemobbt? Bitte kreuze nur die Antwort an, die am ehesten zutrifft.



Kreuze auf der Skala nur die Antwort an, die tendenziell am ehesten auf dich zutrifft. 0 bedeutet 'überhaupt nicht' und 10 bedeutet 'extrem viel'.

	(1) überhaupt nicht	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10) extrem viel
Wieviel Zeit verbringst du mit diesem Geschwisterkind in einer normalen Woche?	0		9	0	9	0	0	0	9	

In den folgenden Fragen geht es um deine Beziehung zu diesem Geschwisterkind.

Kreuze auf der Skala jeweils nur die Antwort an, die tendenziell am ehesten auf euch zutrifft. 0 bedeutet 'überhaupt nicht' und 10 bedeutet 'extrem viel'.

	(1) überhaupt nicht	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10) extrem viel
Manche Geschwister machen oft nette Dinge füreinander, während andere Geschwister selten nette Dinge füreinander machen. Inwiefern machen du und dieses Geschwisterkind nette Dinge füreinander?	C	C	E	E	E	E	E	E	E	E
Manche Geschwister haben sich sehr gerne, während andere Geschwister sich nicht so gerne haben. Wie gerne mögen sich dieses Geschwisterkind und du?	C	C	C	E	C	C			C	C
Inwiefern gehen dieses Geschwisterkind und du zusammen weg und unternehmen Sachen?	C	C	C	C	C	C	C	C	C	
Inwiefern erzählen dieses Geschwisterkind und du einander alles?	6	0			C	G			G	
Inwiefern lieben sich dieses Geschwisterkind und du?	8					C		C	<b>(</b>	
Wie viel haben dieses Geschwisterkind und du gemeinsam?	8	0	0		0	G	0	0	C	0

			yberbui	iyilig ali	iong dei			auviesco		010
	(1) überhaupt nicht	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10) extrem viel
Inwiefern beleidigten und beschimpfen dieses Geschwisterkind und du einander?	9	Ø	9	9	9	9	9	9	0	C
Inwiefern ärgern und schikanieren dieses Geschwisterkind und du einander?			C	C	C	C	C	c	G	
Inwiefern sind dieses Geschwisterkind und du sich uneinig und streiten miteinander?	8	C	8				8		C	C
Inwiefern zeigst du diesem Geschwisterkind Dinge, die er/sie nicht kann?	8	C	8				8		C	C
Inwiefern zeigt dir dieses Geschwisterkind Dinge, die du nicht kannst?	Ģ	9		9		9		8	0	G
Inwiefern sagst du diesem Geschwisterkind, was er/sie tun soll?	8	C	8	8			8		C	B
Inwiefern sagt dir dieses Geschwisterkind, was du tun sollst?			C	C			C			8
Inwiefern bewunderst und respektierst du dieses Geschwisterkind?	8	C	G	8	8	8	G	8		B
Inwiefern bewundert und respektiert dich dieses Geschwisterkind?	C	0	C	C		6	C	C	C	
Inwiefern siehst du zu diesem Geschwisterkind auf und bist stolz auf ihn/sie?	C	0		C		6		0	C	
Inwiefern sieht dieses Geschwisterkind zu dir auf und ist stolz auf dich?	C	0	C	C			C		0	8

Cyberbullying among German and Dutch adolescents 2010

Vielen Dank für deine Mitarbeit :) Du hast mir sehr geholfen!

### Beste deelnemer, Hartelijk bedankt voor je medewerking aan mijn onderzoek! Met hulp van de onderstaande vragenlijst wil ik onderzoek doen naar cyberpesten in scholen. Het invullen van de vragenlijst duurt maximaal 30 MINUTEN. Voordat je zo meteen met de vragenlijst begint, ga je een definitie lezen wat het woord cyberpesten inhoudt. Verder zijn er nog vijf punten die heel belangrijk voor jou en dit onderzoek zijn: (1) Alle antwoorden die je in deze onderzoek geeft worden helemaal anoniem en VERTROUWELIJK door mij verwerkt. Je kunt dus zeker zijn dat noch je ouders, leerders, medeleerlingen noch iemand anders ooit te weten zou komen wat je in het onderzoek zei. (2) Het is héél belangrijk dat je de vragen EERLIJK beantwoordt. Kies dus altijd voor de antwoordmogelijkheid/-heden die het meest van toepassing op jou en jouw situatie is/zijn. (3) Tijdens het invullen en als je eerder klaar bent met het invullen is het belangrijk dat jullie stil blijven zitten en NIET MET ELKAAR PRATEN. Anders is het voor iedereen heel lastig om de vragenlijst goed in te vullen. (4) Verder is het van groot belang dat je de hele dag niet met je medeleerlingen over de INHOUD van het onderzoek en jouw antwoorden praat. Dat kan namelijk tot gevolg hebben, dat je medeleerlingen worden beïnvloed in hun antwoordkeuze. Daardoor kan het onderzoek minder betrouwbaar en derhalve minder goed worden. (5) Om te begrijpen wat er precies wordt verstaan onder cyberpesten is het uitermate belangrijk dat je de DEFINITIE NAUWKEURIG LEEST. Dus, voordat je met het invullen van de vragenlijst begint weet zeker dat je begrijpt wat het woord in dit onderzoek inhoudt. Je kunt nou het onderzoek starten. Lees de definitie van cyberpesten goed door voordat je met het invullen begint. Succes:)

Onder CYBERPESTEN wordt verstaan dat een persoon of een groep een andere persoon tenminste een keer

via het INTERNET (bijv. tijdens het chatten via MSN, op sociale netwerksites zoals Hyves.nl, in emailtjes, op websites, door filmpjes op Youtube.com te plaatsen enz.)

of via MOBIELTJES (bijv. via SMS, via telefoontjes, door het nemen van foto's en filmpjes enz.)

SLECHT BEHANDELT (bijv. beledigt, uitscheldt, bedreigt, intimideert, belachelijk maakt, praatjes over die persoon rondstrooit of ze uit een groep uitstoot)

Ben je een jongen of een n	neisje? Vink aan a.u.b.			
Jongen				
Meisje				
Hoe oud ben jij? Geef je le	aaftiid aan a u h			
		1		
Welke nationaliteit heb jij	? Vink aan a.u.b.			
Nederlands				
Anders,				
namelijk:				
Hoeveel uren besteed je po	er dag aan internetten? Vi	ink het antwoord aan da	at het meest van toepassing	is.
0-1 uur				

1-3 uur

3-6 uur

meer dan 6 uur

### Wat doe je voornamelijk op het internet? Vink slechts het antwoord aan dat het meest van toepassing is.

Ik maak huiswerk en andere opdrachten van school

Ik chat met andere mensen

Ik houd me bezig met sociale netwerksites (bijv. Hyves.nl, Facebook.com, ...)

Ik doe voornamelijk iets anders,

namelijk:

Heb je een eigen mobieltje? Vink aan a.u.b.

Ja

Nee

Hoe vaak gebruik je jouw mobieltje? Vink slechts het antwoord aan dat het meest van toepassing is.

Nooit

Zelden

Soms

Vaak

Elke dag

Gebruik je je mobieltje ook op school? Vink aan a.u.b.

Ja

Nee

Werd je in de afgelopen 2 maanden via het internet en/of via mobieltje gepest? Vink slechts het antwoord aan dat het meest van toepassing is.

Ja, 1-2 keer in totaal

Ja, 2-3 keer per maand

Ja, een keer per week

Ja, vaker dan een keer per week

Nee, geen enkele keer

Je hebt net aangegeven dat je via het internet en/of via het mobieltje gepest werd.

Kun je in een zin kort beschrijven, wat er precies gebeurd is (bv. je kreeg gemene SMS, je werd tijdens het chatten beledigd enz.) ?

Heb je met iemand over je ervaringen gepraat, toen je slachtoffer van cyberpesten werd? Hier mag je meerdere antwoorden aanvinken.

Ja, met een vriend/vriendin

Ja, met mijn ouders

Ja, met mijn leraar/lerares

Ja, met vrienden/bekenden van het internet

Ja, met iemand anders

Nee, met niemand

Had je het gevoel dat deze persoon met wie je spraak over je ervaringen jouw probleem serieus heeft genomen? Vink a.u.b. alleen het antwoord aan dat het meest van toepassing is.

Ja, helemaal

Jawel

Nee, niet echt

Nee, helemaal niet

Weet ik niet

Weet je wie de persoon was die jou via het internet en/ of via mobieltje pestte? Hierbij kun je meerdere antwoorden aanvinken.

Ja, een vriend/vriendin Ja, een mede-scholier

Ja, mijn broer/zus

Ja, maar iemand die ik niet persoonlijk ken

Ja, iemand anders

Nee, weet ik niet

Heb je zelf in de afgelopen 2 maanden iemand anders via internet en/of via mobieltje gepest? Vink slechts het antwoord aan dat het meest van toepassing is.

Ja, 1-2 keer in totaal

Ja, 2-3 keer per maand

Ja, een keer per week

Ja, vaker dan een keer per week

Nee, geen enkele keer

## Heb je in de afgelopen 2 maanden meegekregen dat er iemand die je kent van school via internet en/of via mobieltje gepest werd? Vink slechts het antwoord aan dat het meest van toepassing is.

Ja, 1-2 keer in totaal

Ja, 2-3 keer per maand

Ja, een keer per week

Ja, vaker dan een keer per week

Nee, geen enkele keer

## Heb je hulp verleend aan die persoon toen je meekreeg dat hij/zij gepest werd? Hierbij kun je meerdere antwoorden aanvinken.

Ja, ik heb meteen ingegrepen

Ja, ik heb deze persoon mijn hulp aangeboden als het nog een keer gebeurt

Ja, ik heb de dader overtuigd deze persoon met rust te laten

Ja, ik heb andere mensen om hulp gevraagd die beter kunnen helpen (bijv. leraren, ouders, medescholieren, ...)

Nee, ik heb het niet gedurfd

Nee, deze persoon heeft het verdiend

Nee, dat gaat mij niet aan

Nee, maar om andere redenen,

# namelijk:

### Weet je of er op je school maatregelen speciaal tegen cyberpesten zijn? Vink aan a.u.b.

Ja

Nee

Op welke manier ben je hiervan op de hoogte gebracht? Hier mag je meerdere antwoorden aanvinken.

Tijdens de les

Door medescholieren

Door mijn ouders

Door het internet

Anders, namelijk:

Zou je willen dat jouw school dergelijke regels opstelt en maatregelen neemt als deze niet worden opgevolgd? Vink slechts het antwoord aan dat het meest van toepassing is.

Ja, dat zou ik goed vinden

Nee, dat heeft toch geen zin

Nee, de school zou zich er niet mee moeten bemoeien

- Het maakt mij niet uit
- Weet ik niet

## Welke maatregelen zal jouw school volgens jou opstellen om de scholieren tegen cyberpesten te beschermen? Vink slechts het antwoord aan dat je het best vindt.

Alle scholieren in de les over het gevaar van cyberpesten voorlichten, en uitleggen hoe je je het best kunt gedragen in een dergelijke situatie.

Op de schoolwebsite informatie verstrekken over het gevaar van cyberpesten, en uitleggen hoe je je het best kunt gedragen in een dergelijke situatie (op die manier kan iedereen, die interesse in het onderwerp heeft, zichzelf informeren). Bepaalde leraren of scholieren speciaal opleiden, waarbij scholieren altijd persoonlijk of anoniem met vragen of zorgen terecht kunnen (bijv. via email of brieven)

Installeren van een internetforum dat via de schoolwebsite bereikbaar is. Hier kunnen scholieren, die met cyberpesten in aanraking zijn gekomen of zelf slachtoffer zijn/werden, anoniem ervaringen uitwisselen en elkaar steunen.

Straffen als schorsing of, indien van toepassing, zelfs een aangifte doen bij de politie

Zou jij nou aan willen geven in hoeverre jij het oneens of eens bent met de volgende stellingen? Vink voor elke stelling slechts het antwoord aan dat het meest van toepassing is a.u.b.

	helemaal oneens	beetje oneens	niet eens,niet oneens	beetje eens	helemaal eens
Ik kan zelf een bijdrage leveren aan het bestrijden van cyberpesten door de pester te overtuigen te stoppen.					
Ik ben in staat het slachtoffer van cyberpesten te verdedigen.					
Wanneer ik zie dat iemand gecyberpest wordt, weet ik wat ik moet doen.					
Wanneer ikzelf gecyberpest word, weet					

Hieronder volgen stellingen over hoe jij in het ALGEMEEN denkt en doet.

Zou jij nou aan willen geven in hoeverre jij het oneens of eens bent met deze stellingen? Wil jij daartoe voor alle stellingen het antwoord dat het meest van toepassing is op jou aankruisen? Er zijn geen juiste of foute antwoorden, het gaat slechts om jouw mening.

Als iemand mij tegenwerkt, vind ik toch manieren om te krijgen wat ik wil.	(1) volledig onjuist	(2) nauwelijks juist	(3) enigszins juist	(4) volledig juist
Het lukt me altijd moeilijke problemen op te lossen, als ik er				

Ik vertrouw erop dat ik onverwachte gebeurtenissen

genoeg moeite voor doe.

ik wat ik moet doen.

(1) volledig onju	ist (2) nauwelijks juist (3) en	igszins juist	(4) volledig juist
at het meest van to	epassing is a.u.b.		
(1) helemaal niet ernstig	(2) niet echt ernstig (3) enigzins ernstig	(4) nogal ernstig	(5) zeer ernstig
	at het meest van to (1) helemaal niet	at het meest van toepassing is a.u.b. (1) helemaal niet (2) niet echt ernstig (3) enigzins ernstig	at het meest van toepassing is a.u.b. (1) helemaal niet (2) niet echt ernstig (3) enigzins ernstig (4) nogal ernstig

Als ik word blootgesteld aan cyberpesten, dan zijn de gevolgen voor mij...

De invloed van cyberpesten op het leven van jongeren is ...

Dat er een groot aantal jongeren betrokken is bij cyberpesten lijkt me ...

Vink het antwoord aan dat het meest van toepassing is a.u.b.

	zeer klein	nogal klein	niet klein, niet groot	nogal groot	zeer groot
Hoe groot acht je de kans dat er in je directe omgeving (je school of klas) cyberpesten plaatsvindt?			-		
Hoe groot acht je de kans dat jij blootgesteld wordt aan cyberpesten?					

Hoe groot acht je de kans dat jij schade oploopt door cyberpesten (bijv. dat je verdrietig bent, bang bent om naar school te gaan enz.)?	zeer klein	nogal klein	niet klein, niet groot	nogal groot	zeer groot
Stel de situatie dat je wo	rdt blootgesteld aan	cyberpesten. Hoe v	oel je je dan?		
Vink a.u.b. het antwoord	l aan dat het meest v	an toepassing is op	jou.		
	(1) helemaal niet	(2) nauwelijks	(3) enigzins	(4) nogal	(5) heel erg
Gespannen					
Veilig					
Angstig					
Boos					
Kalm					
Bezorgd					
Nerveus					

Vink a.u.b. het antwoord aan dat het meest van toepassing is op jou.

	(1) helemaal niet	(2) nauwelijks	(3) enigzins	(4) nogal	(5) heel erg
Ik ben geïnteresseerd in					
de gevolgen van cyberpesten					
Cyberpesten heeft					
invloed op mijn					
dagelijks leven					

Ik voel mij betrokken bij dit risico

Stel dat er een persoon uit je groep vrienden zich gedraagt zoals in de volgende stellingen aan de linker kant beschreven. De andere vrienden kunnen het gedrag van deze persoon als 'heel slecht', 'slecht', 'noch slecht, noch goed', 'goed' of 'heel goed' beoordelen.

Wat denk je HOE DE ANDERE VRIENDEN HET GEDRAG VAN DEZE PERSOON ZOUDEN BEOORDELEN?

Vink dus voor elke stelling aan hoe je vrienden het zouden vinden als zich deze persoon gedraagt zoals hieronder

beschreven.

	heel slecht	slecht	noch slecht, noch goed	goed	heel goed
Deze persoon begint via het internet te pesten.			gotu		
Deze persoon overtuigt anderen om bij het cyberpesten mee te doen.					
Deze persoon troost het slachtoffer achteraf.					
Deze persoon vindt altijd nieuwe manieren om het slachtoffer via internet en/of via het mobieltje te plagen.					
Deze persoon maakt anderen bang ze uit te sluiten op het internet (bijv. bij Hyves.nl)					
Deze persoon zendt gemene emailtjes, sms en pleegt gemene telefoontjes.					
Deze persoon vertelt het cyberpesten aan een volwassene.					
Deze persoon neemt foto's via het mobieltje en perst het slachtoffer daarmee af.					
Deze persoon probeert de andere van het cyberpesten terug te houden.					
Deze persoon strooit geruchten uit via het internet en/of via mobieltjes.					

Zou jij nou aan willen geven in hoeverre jij het oneens of eens bent met deze stellingen? Vink voor elke stelling het antwoord aan dat volgens jou (tendentieel) het meest van toepassing is.

Ben ik heel erg tegen Noch tegen noch voor Ben ik heel erg voor

Cyberpesten onder jongeren is iets heel gewoons.

Slachtoffer van cyberpesten te worden sterkt het karakter.

Jongeren die in het internet gepest worden hebben dat verdiend.

Vink nou het antwoord aan dat het meest van toepassing is op jou.

Weet je of jongeren die cyberpesten bij de politie aangegeven kunnen worden?

Ja, heel zeker

Ja, dat kan

Nee, dat kan ik me niet voorstellen

Nee, heel zeker niet

Geen idee

Denk je dat cyberpesten emotionele of lichamelijke problemen voor het slachtoffer tot gevolg kan hebben (bijv. angst om naar school te gaan, buikpijn, slechte school prestaties enz.)?

Ja, heel zeker

Ja, dat kan

Nee, dat kan ik me niet voorstellen

Nee, heel zeker niet

Geen idee

Je hebt net aangegeven dat je denkt dat cyberpesten emotionele of lichamelijke problemen voor het slachtoffer tot gevolg kan hebben.

Zou je nou aan willen geven aan welke problemen je in dit verband concreet denkt? Geef maximaal twee problemen aan a.u.b.

	۸	
	$\overline{\mathbf{v}}$	

Onwaar

Denk je dat jongeren die online en/of via mobieltje gepest worden, er erg van last hebben?

Ja, heel zeker
Ja, dat kan
Nee, dat kan ik me niet voorstellen
Nee, heel zeker niet
Geen idee

Hieronder volgen stellingen over hoe jij in het algemeen voelt en doet.

Zou jij aan willen geven of elke stelling op jou van toepassing is? Wil jij daartoe voor alle stellingen aankruisen of de stelling "waar" of "onwaar" is? Er zijn geen objectief juiste of foute antwoorden, het gaat slechts om jouw mening en ervaring.

Waar

Ik leef me in de
gevoelens van anderen
mensen in.
Ik lijd er onder als
anderen verdriet
hebben.
Ik snap er niets van
mensen die zich
emotioneel gedragen.
Ik word snel sterk
geraakt door de
ongelukken van
anderen
Ik heb geen
belangstelling voor de
problemen van anderen.
Ik ben makkelijk tot
tranen geroerd.
Ik beleef mijn gevoelens
intensief.
It loot roldon miin
Ik laat zelden mijn
gevoelens de vrije loop.
It was no geostalijk
Ik voel me geestelijk verbonden met andere
verbonden met andere

mensen.	Wa	Waar Onwaar				
Geef aan hoe vaak je je V( Vink per stelling slechts ho				ıgen staat bes	chreven.	
Hier betekent "zelden of n = 5-7 dagen.	ooit" = minder dan 1 d	ag, "soms" = 1-2 o	dagen, "weleens" :	= 3-4 dagen "o	de meeste of de hele tijd"	
Ik voelde me gedeprimeerd.	zelden of nooit	soms	We	leens	de meeste of de hele tijd	
Ik voelde me eenzaam.						
Ik had (korte) perioden van huilen						
Ik was bedroefd.						
Hieronder volgen stellinge Zou jij aan willen geven in het antwoord aan dat het 1	hoeverre jij het oneen neest van toepassing is	s of eens bent met		ngen? Vink v	oor elke stelling slechts	
	(1) helemaal oneens	(2)	(3)	(4)	(5) helemaal eens	
Ik heb de neiging om mezelf minder waard te vinden						
Ik voer dingen heel succesvol uit						
Ik voel me op mijn gemak met mezelf						
Wat ik aanpak, lukt bijna altijd						
Ik weet zeker dat ik een waardevol mens ben Soms vind ik het vervelend over mezelf						
na te denken						
Ik neem een negatieve houding aan ten opzichte van mezelf						
Ik vind het soms moeilijk om de dingen te bereiken die belangrijk voor me zijn						
Ik vind mezelf leuk zoals ik ben						

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Soms kan ik slecht met uitdagingen omgaan	(1) helemaal oneens	(2)	(3)	(4)	(5) helemaal eens
Ik twijfel er nooit aan dat ik een waardevol mens ben					
Ik kan veel dingen heel goed					
Soms slaag ik er niet in mijn doelen te bereiken					
Ik heb veel talenten					
Ik breng niet voldoende respect voor mezelf op					
Ik wou dat ik sommige dingen wat handiger aanpakte					

Stel dat zich een persoon tegen anderen gedraagt zoals in de volgende stellingen aan de linker kant beschreven. JIJ kunt het gedrag van deze persoon als 'heel slecht', 'slecht', 'noch slecht, noch goed', 'goed' of 'heel goed' beoordelen.

Hoe zou JIJ het gedrag van deze persoon beoordelen?

Vink dus voor elke stelling aan hoe jij het zou vinden als zich deze persoon gedraagt zoals hieronder beschreven.

	heel slecht	slecht	noch slecht, noch goed	goed	heel goed
Deze persoon begint via het internet te pesten.			9		
Deze persoon overtuigt anderen om bij het cyberpesten mee te doen.					
Deze persoon troost het slachtoffer achteraf.					
Deze persoon vindt altijd nieuwe manieren om het slachtoffer via internet en/of via het mobieltje te plagen.					
Deze persoon maakt anderen bang ze uit te sluiten op het internet (bijv. bij Hyves.nl)					

Deze persoon zendt gemene emailtjes, sms en pleegt gemene telefoontjes.	heel slecht	slecht	noch slecht, noch goed	goed	heel goed
Deze persoon vertelt het cyberpesten aan een volwassene.					
Deze persoon neemt foto's via het mobieltje en perst het slachtoffer daarmee af.					
Deze persoon probeert de andere van het cyberpesten terug te houden.					
Deze persoon strooit geruchten uit via het internet en/of via mobieltjes.					

Met hoeveel broers en zussen ben je opgegroeid? (Opgegroeid betekent dat jullie t/m nu samenwonen of samengewoond hebben en/of heel veel contact met elkaar hebben of hadden)

Geef het aantal telkens aan a.u.b. (denk hier dus aan oudere/jongere broers en zussen en stiefbroers/stiefzussen)

Broers:	
Zussen:	

### Ben jij het oudste of het jongste kind thuis? Vink het antwoord aan dat van toepassing is.

Het oudste kind

Het jongste kind

Noch het oudste noch het jongste, ik ben het middelste kind

Noch het oudste noch het jongste, ik ben het enig kind

### Geef nou aan of het oudste kind in jouw gezin een jongen of een meisje is.

Jongen

Meisje

#### Geef aan hoe veel jaren verschil er tussen jou en je oudste broer of zus zijn.

Heeft je oudste broer of zus wel eens iemand via internet en/of via mobieltje gepest? Vink het antwoord aan dat het meest van toepassing is a.u.b.

Ja, vaak

Ja, soms

Ja, maar zelden

Ja, een enkele keer

Nee, nooit

Weet ik niet

Bedenk, voordat je antwoord geeft op de volgende vragen, wie voor jou de MEEST BELANGRIJKE BROER OF ZUS is. De volgende vragen en stellingen hebben ALLEEN betrekking op deze broer of zus. (Indien je slechts één broer of zus hebt, denk voor de beantwoording van de volgende vragen steeds aan deze broer of zus).

Geef nou aan of deze persoon je oudste broer of zus is.

Ja, hij/zij is het oudste kind

Nee, hij/zij is niet het oudste kind

Hoe oud is deze broer of zus? Geef de leeftijd aan a.u.b.

Heeft deze broer of zus wel eens iemand via internet en/of via mobieltje gepest? Vink het antwoord aan dat het meest van toepassing is a.u.b.

Ja, vaak Ja, soms Ja, maar zelden Ja, een enkele keer Nee, nooit Weet ik niet

Vink het antwoort op de schaal aan dat tendentieel het meest van toepassing is.

0 betekent 'geheel niet' en 10 betekent 'extreem veel'.

	geheel niet (1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	extreem veel (10)
Hoeveel tijd breng je in										
een normele week met										
deze broer of zus door?										

De volgende vragen gaan over jouw relatie met deze broer of zus.

Vink het antwoort op de schaal aan dat tendentieel het meest van toepassing is.

0 betekent 'geheel niet' en 10 betekent 'extreem veel'.

	geheel niet (1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	extreem veel (10)
Sommige broers en zussen doen vaak aardige dingen voor elkaar, terwijl andere broers en zussen zelden aardige dingen voor elkaar doen. In hoeverre doen jij en deze broer of zus aardige dingen voor elkaar?										
Sommige broers en zussen mogen elkaar graag, terwijl andere broers en zussen elkaar niet graag mogen. In hoeverre mogen jij en										

		(	Cyberbu	llying ar	nong Ge	rman an	d Dutch	adolesc	ents 2	2010	
deze broer of zus elkaar graag?	geheel niet (1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	extreem veel (10)	
In hoeverre gaan jij en deze broer of zus samen uit en ondernemen dingen met elkaar?											
In hoeverre vertellen jij en deze broer of zus jullie alles aan elkaar?											
In welke mate houden jij en deze broer of zus van elkaar?											
Hoeveel hebben jij en deze broer of zus met elkaar gemeen?											
In hoeverre beledigen jij en deze broer of zus elkaar?										8	
In hoeverre plagen jij en deze broer of zus elkaar en zitten op elkaars kop?	0	8	C				C	C	e	C	
In hoeverre zijn jij en deze broer of zus het oneens en ruzieën met elkaar?	e	9	C			C	8	8	e	C	
In hoeverre laat je deze broer of zus zien hoe dingen gedaan worden die hij/zij niet kent?	c	9	C	C		G	G	G	e	C	
In hoeverre laat deze broer of zus jou zien hoe dingen gedaan worden die jij niet kent?	e	9	C	C	G	G	G	G	e	C	
In hoeverre zeg je tegen deze broer of zus wat hij/zij moet doen?	8	9	C		C	C	C	C	9		
In hoeverre zegt deze broer of zus tegen jou wat jij moet doen?	C	0		C	C	C	C	C	0	0	
In hoeverre bewonder en respecteer jij deze broer of zus?	C	0	0	0	C		C	C	۲		
In hoeverre bewondert en respecteert deze broer of zus jou?	C	0	C	C	C	C	C	C	0	e	

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In hoeverre kijk jij tegen deze broer of zus op en ben je trots op hem/haar?	geheel niet (1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	extreem veel (10)
	9	0	0	0	0	C	0	0	0	0
In hoeverre kijkt deze broer of zus op tegen jou en is trots op jou?	G	0	0	6	0	0	9	9	G	6

Hartelijk dank voor het afleggen van mijn enquête! Je hebt mij erg geholpen :)