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Why cyberbullies choose cyberspace: From the perspective of uses and gratifications

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**Why cyberbullies choose cyberspace:
From the perspective of uses and gratifications**

by

Sisi Hu

A thesis submitted to the graduate faculty
in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE

Major: Journalism and Mass Communication

Program of Study Committee:
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ABSTRACT

This study employs uses and gratifications (U&G) theory to examine the motives and face-to-face bullying experiences of cyberbullies and how those motives and experiences influence their Internet bullying. An online survey and multiple regressions were employed to test the hypotheses. The results revealed that a cyberbully with more victim experience in face-to-face bullying will be more likely to have reactive than instrumental aggression motives to conduct cyberbullying behavior; while a cyberbully with more bully experience in face-to-face bullying will be more inclined to instrumental than reactive aggression motives. Further, a cyberbully with either reactive motives or instrumental motives relies on both the anonymity and wider audience available on the Internet. The results contribute to U&G theory with problem behavior research, and some practical applications of anti-cyberbullying campaigns are discussed.

Keywords: cyberbullying, U&G, reactive motives, instrumental motives, anonymity, wider audience

CHAPTER 1

INTRODUCTION

In recent years, there has been a dramatic increase in mainstream media news coverage of teenagers who have committed suicide or suffered other severe physical and psychological harm after experiencing the cyberbullying. Hillary Clinton suggested, “Don’t take it personally,” in a speech about cyberbullying earlier this year (CNN, April 22, 2016). However, it is hard for teenagers to take this advice, particularly considering their vulnerable age. Also, the problem of cyberbullying should address more than how victims cope with or manage the situation, but how to prevent cyberbullying behavior. This study examines the issue of cyberbullying from the cyberbully’s perspective.

Some past cyberbullying cases involved bullies from victims’ daily lives, who were not anonymous to their victims. For example, a 13-year-old girl, Hope Witsell, hanged herself after repeatedly being bullied both off- and online (CNN, Oct. 7, 2010). Her offline bullies posted a sexual image of her online and started a “Hope Hater Page.” However, more often, cyberbullying cases are anonymous, as in the example of a 12-year-old girl, Rebecca Sedwick, who jumped to her death after she repeatedly received hateful messages on her Ask.fm profile pages (CNN, October 10, 2013). Those messages, such as “Why aren’t you dead?”, “Wait a minute, why are you still alive?”, and “Go kill yourself,” were sent anonymously or by fictitious profiles set up through the website. After several suicide cases happened following bullying activity through anonymous apps, more and more attentions were directed to those apps and websites that allow for anonymity, such as Ask.fm, Kik, Yik Yak, and Twitter. This study will focus on such anonymous cyberbullying.

Many scholars have researched cyberbullying to find possible solutions and combat its detrimental effects. Current solutions focus on how to prevent the harmful results. For example, Sticca and Perren (2013) posited that encouraging reporting by victims and bystanders can be a useful reduction method. They explained that most cyberbullying cases were not reported by victims and bystanders because the victims feared that their parents restricted their access to devices (Bauman, 2010; Blake & Louw, 2010) and the bystanders did not aware those cases were severe enough to report. Thus, they proposed that increase the awareness of the severity of cyberbullying is important to encourage people to report (Sticca & Perren, 2013). However, this assertion is aimed at reducing the cyberbullying behavior after it has occurred; more effective solutions are needed for early prevention of cyberbullying before it happens.

Before exploring solutions of early prevention, verifying the exact motives of cyberbullying is important. Face-to-face bullying often requires a real or perceived power of imbalance between the bully and the victim (Olweus, 1994). Bullies often have some real or perceived advantage(s) over their victims in aspects of physical attributes (e.g., strength, height), social status (e.g., popularity), established hierarchical status (e.g., more senior individuals bullying their subordinates), and/or other perceived attribute that provides a sense of power to the bully (Olweus, 1994; Barlett, Prot, Anderson, & Gentile, 2016). Thus, demonstrating power is an important motive of bullies (Atlas & Pepler, 1998; Olweus, 1994). However, the anonymity of the Internet made the imbalance of power less salient in cyberbullying, so that other factors may come to be more important. Grading, Strohmeier, and Spiel (2011) compared the motives of face-to-face bullies and cyberbullies, and discovered that for face-to-face bullies, anger is the most important motive, while cyberbullies' stronger motives were power, anger, affiliation, and fun. However, König, Gollwitzer and Steffgen (2010), after testing different kind of motives,

found revenge to be the main motive in cyberbullying. These inconsistent results indicated that more empirical research about motives of cyberbullies are needed.

Since cyberbullies are also cyber audiences, to explore why they choose cyberspace as their “crime spots” can reflect their underlying motives. The theory of uses and gratifications (U&G) is one of the most suitable theories to explore audience motives for media use. The primary differences between Internet settings and face-to-face settings are anonymity and wider bystander audiences. By examining what needs these two traits gratify for cyberbullies, this study will examine the possible motives behind selecting cyberspace as their bullying settings.

Thus, the current study employs the U&G theory to explore the motives and face-to-face bullying experiences of cyberbullies and how those motives and experiences influence their Internet bullying behaviors. The results of this study contribute to U&G theory with problem behavior research—people not only consume media content to gratify their needs, but also use media forms and processes to meet their aggressive needs. In addition, some practical tips of anti-cyberbullying campaigns are discussed based on the results.

CHAPTER 2

LITERATURE REVIEW

Definitions of Bullying and Cyberbullying

Traditional face-to-face bullying is defined as a repeated and intentionally aggressive behavior pointed towards another, which involves a real or perceived imbalance of power (Olweus, 1993; Cullingford & Morrison, 1995; Gladden, Vivolo-Kantor, Hamburger, & Lumkin, 2014). This definition indicates four characteristics of bullying: repeated, intentional, harmful, and imbalance of power. Two of them—repetition and power imbalance—distinguish bullying from general aggression (i.e., cause harm intentionally without emphasizing repetition and power imbalance) (Slonje, Smith, & Frisen, 2013). As a special kind of aggression, bullying can be classified into three main types: physical, verbal and indirect forms (Kalliotis, 2000). Physical bullying includes “hitting, kicking, punching, taking or damaging belongings” but except for attacks on properties (Kristensen & Smith, 2003; Slonje & Smith, 2008). Verbal bullying refers to “teasing, taunting, and threatening” (Slonje & Smith, 2008). Indirect bullying can be carried out by a third party or hurt the victim’s relationships and social status, through actions such as spreading rumors (Underwood, 2002; Slonje & Smith, 2008).

As cyber technology has developed, a new form of bullying has emerged, known as “cyberbullying.” Extending the definition from traditional bullying, cyberbullying is widely defined as the intentional, repeated harmful behavior against others via the use of electronic communication technologies (Hinduja & Patchin, 2008), including e-mail, instant messaging, blogs, chat rooms, social media, online gaming, etc. (e.g., Slonje & Smith, 2008; Patchin & Hinduja, 2012; Whittaker & Kowalski, 2015). Comparing the definitions of cyberbullying and

traditional bullying, three characteristics are nearly the same: intentional, harmful and repeated, although the nature of repetition changes in this context; while a single harmful act may not be carried out by the same bullies on the Internet, the victim can still experience repeated hurt (Slonje et al., 2013). For example, a rumor about a victim may be initially posted by one perpetrator, but can later be forwarded by other people on the Internet, thus repeating the harm to the victim.

Imbalance of power is not emphasized in the definition of cyberbullying. In traditional bullying, the imbalance of power may be by virtue of numbers, popularity or exclusion from a peer group (Slonje et al., 2013), physical attributes, social status, established hierarchical status, or other traits that provide a sense of power (Barlett et al., 2016). For cyberbullying, some researchers have found power imbalance to be a less salient factor because of the anonymity of the Internet, so excluded it from their definition (Law, Shapka, Hymel, Olson, & Waterhouse, 2011); others argued the power imbalance is formed by unique factors that differentiate cyberbullying from traditional bullying, such as Internet communication skills and the anonymity of the Internet (Vandebosch & Van Cleemput, 2008). To be specific, in traditional bullying, the power imbalance is often based on the physical strength; however, in cyberspace, since people cannot see each other, the online technological knowledge more often becomes the source of power imbalance (Jordan, 1999). Several previous studies reveal the age trends of cyberbullying support a technological explanation of power imbalance: compared with traditional bullying, which mainly happens during childhood and preadolescence (Brown, Birch, & Kancherla, 2005; Fitzpatrick, Dulin, & Piko, 2007), cyberbullying mainly occurs during preadolescence and adolescence (Hinduja & Patchin, 2008; Smith, Mahdavi, Carvalho, Fisher, Russell, & Tippett,

2008; Ybarra & Mitchell, 2004). Generally, older students are more familiar with the Internet, which makes the imbalance of online skills more salient in this group of students.

However, Barlett, et al. (2016) examined two factors—online skill and a lack of concern about power imbalance (physical strength in particular)—in cyberbullying, and found that a lack of concern for physical strength predicts cyberbullying more than online skill. In other words, the power imbalance trait supposedly inherent to cyberbullying, online skills, is not a salient factor to predict cyberbullying, though it provides the possibility for its occurrence; however, a lack of concern about power imbalance plays a significant role in cyberbullying. This disregard for power imbalance is provided by the anonymity of the Internet. The anonymity of the Internet in cyberbullying has also been emphasized by previous research. Patchin and Hinduja (2006) proposed that due to its anonymity, cyberbullying is hard to supervise and stop. Ybarra and Mitchell (2004) posited that a person’s “ability to keep his or her identity unknown is a unique method of asserting dominance online that conventional bullying disallows” (p. 1313). However, Ybarra and Mitchell (2004) considered it as a part of online skills. Comparing the two concepts, the “lack of concern about power imbalance” and the “anonymity-keeping skill”, people who relied primarily on the former one appeared more passive, and those who relied on the latter appeared more active. To be specific, “lack of concern” indicates the Internet allows people pay less attention to the visible imbalance, because of its anonymity; while the “anonymity-keeping skill” indicates the perpetrators’ concern with their anonymity, so that they actively cultivate skills to keep this anonymity. Both perspectives noticed the anonymity’s role in cyberbullying, but the issue of perpetrators using this trait passively or actively is still uncertain.

In addition to differences in the imbalance of power, anonymity, and technological requirements, the Internet provides other unique traits to cyberbullying. Because of the Internet

medium's lack of space and time limitations, cyberbullying can reach a farther distance and a wider audience, with faster repetitions (Slonje & Smith, 2008; Sticca & Perren, 2013). Though past research has not indicated if a wider audience plays a salient role in cyberbullying, it likely increases the influence of cyberbullying.

The Motives of Bullying and Cyberbullying

Motives of face-to-face bullying

Bullying is a subcategory of aggressive behavior; thus, a general understanding of this category is necessary before examining the particular motives of bullying. Some researchers have described two concepts as the underlying mechanisms, functions, or motive systems for aggressive behavior: *reactive aggression* and *instrumental aggression* (Dodge, 1991; Little, Jones, Henrich, & Hawley, 2003; Vitaro & Brendgen, 2005; Card & Little, 2006; Fandrem, Strohmeier, & Roland, 2009). Reactive aggression, also named affective, hostile, hot, impulsive, or retaliatory aggression, a term from anger-frustration theory (Dollard et al., 1939), is to punish/hurt a targeted person as a reaction to a provocation, threat, or frustration, usually with a strong feeling of anger (Gradinger et al., 2011; Warburton & Anderson, 2015). In contrast, instrumental aggression, also called proactive, planned, or cold aggression, based on social learning theory (Bandura, 1986), is to harm another with a considered and deliberate plan for a desired outcome (Warburton & Anderson, 2015). However, as Warburton and Anderson (2015) pointed out, this kind of functional classification can be problematic. If a person's anger drives them to carefully plan harm to another, then to which category of aggressive behavior should this be assigned? Thus, instead of using categorical distinctions (reactive or instrumental), a dimensional explanation may be more appropriate, i.e., the degree to which the behavior's goal is to harm the victim or benefit the perpetrator (Anderson & Huesmann, 2003). It is true that

reactive and instrumental aggression may be considered on a continuum, not distinctive concepts, but in most cases it is possible to determine which category motivated aggressive behavior if more details are provided. For example, if a person's careful planning is driven by his/her anger, it is likely that the reactive motive appeared first and elicited the instrumental motive, and thus, the reactive motive is more likely to be the main motive. This dimensional approach to explanation can help us decide an aggressive behavior is more likely to be motivated by reactive or instrumental motives.

Past research on bullying has examined how bullying behavior is related to reactive and instrumental aggression. Some scholars posited that instrumental aggression is the underlying mechanism of bullying (Dodge, 1991; Berkowitz, 1993; Olweus, 1993; Sutton, Smith, & Swettenham, 1999). However, some empirical studies have shown that reactive aggression is also associated with bullying behaviors (Roland & Idsøe, 2001; Salmivalli & Nieminen, 2002; Fandrem et al., 2009; Gradinger et al., 2011). Since reactive aggression is a coping behavior for anger, it follows that the main motive for reactive aggression is anger (Roland & Idsøe, 2001). For the instrumental aggression, Roland and Idsøe (2001) distinguished two motives, power and affiliation. A person with a power motive intends to dominate others, while a person with an affiliation motive wants to build good relationships (with other bullies) (Roland & Idsøe, 2001). In one study of eighth grade pupils in Norway, bullying behavior was positively associated with the motives of power and affiliation, but not anger. However, in fifth graders, power, affiliation, and anger were all associated with bullying behaviors. Salmivalli and Nieminen (2002) also found that power, affiliation, and anger motives were related with bullying behaviors in the age group of 10 to 12 years old (fifth graders).

Compton, Campbell and Mergler (2014) used qualitative focus groups of students aged 13 to 14 years old to examine people's perceptions of bullies' motives. The key themes that emerged from the results, from most frequently occurring to least, were power and status, difference, peer pressure, anger/frustration at having been a victim of bullying, and fun/boredom. According to the researchers, the motive of the power and status is related to establishing power or desiring a bigger reputation. The difference refers to perceived differences in various attributes, such as race, appearance, and academic ability. From their definitions, generally, the themes of power/status and difference match with the motive of power in the research of Roland and Idsøe (2001), while peer pressure corresponds with affiliation, and the anger/frustration are the same for both studies. The only one motive in the research of Compton et al. (2014) which does not correspond with Roland and Idsøe's (2001) research is fun/boredom. However, this motive was also included in the research of Gradinger et al. (2011), and be further explored using Anderson and Huesmann's dimensional explanation (2003), explained above as the degree to which a behavior's goal is to harm the victim versus benefit the perpetrator. In this case, to have fun or get rid of boredom is closer to the goal of benefiting the perpetrator, and can also be taken as a motive of instrumental aggression.

Based on previous research, the four main motives for adolescent bullying behavior are power, affiliation, anger, and fun, with power as the most frequent motivating factor. In addition, three out of four of these motives fall under the category of instrumental aggression. Thus, it is reasonable to conclude that the motives of traditional face-to-face bullying are mainly instrumental motives, including power, affiliation, and fun. This may be because the imbalance of power is visible in face-to-face bullying, making it difficult for victims with less power than

their bullies to defend themselves or take revenge, the behavior typically driven by reactive motives.

Motives of cyberbullying

Cyber media's special characteristics (e.g., anonymity, wider audiences/bystanders, less limitations on time and space, less feedback, and less supervision) endow the possibly different motives in cyberbullying behaviors. Some research has been conducted to examine the main motives of cyberbullying; however, the results are inconsistent. Raskauskas and Stoltz (2007) examined the motives by asking 84 US adolescents aged 13 to 18 why bullies use the Internet or cell phones to bully others, and the results showed that the most frequent motive was "for fun" (instrumental motive), the second was "to get back at someone they are mad at" (reactive motive), and the least frequent was because they "feel bad about themselves" (instrumental motive). Grading, Strohmeie and Spiel (2009) investigated 761 adolescents from 14 to 19 years old in Austria and found that cyberbullies demonstrated both reactive and instrumental aggression in their motives. Konig et al. (2010) found that victims in traditional face-to-face bullying tend to choose their former perpetrators as their victims for revenge or retaliation in cyberbullying. This result indicates that reactive aggression motives are the main motives for cyberbullying. However, in 2012, Grading et al. compared the motives of traditional face-to-face bullies, cyberbullies, and combined bullies (those who act in traditional face-to-face settings and in cyberspace), and found that, for cyberbullies and combined bullies, anger is an important motive; however, for combined bullies, they pursue strong instrumental motives (power, affiliation, and fun). They posited that cyberbullies act not only to cope with their anger, but also to pursue certain goals (Grading et al., 2012). In other words, cyberbullies are more active and purposeful than traditional face-to-face bullies.

Previous studies reflect inconsistent results in the motives of cyberbullies. There may be two reasons. First, most of these studies did not consider cyberbullies' previous experience. For traditional face-to-face bullies, their Internet bullying activities may be because of the same instrumental motives; while for traditional face-to-face victims, because of the anonymity of the Internet, they do not have to be concerned about the imbalance of power, which allows opportunities for revenge. Grading et al. (2012) compared the different motives between pure cyberbullies and combined bullies, and provided evidence showing that previous identities in face-to-face bullying play an important role; however, more research about previous identity's influence is needed to verify that different previous experience can cause different motives. The second possible reason for inconsistent results may due to the methods used by previous research. In Grading et al.'s (2012) research, when they examined the motives of cyberbullies, they measured motives by four statements— "to show that I am more powerful," "to be accepted by my friends," "because it was fun," and "because I was angry." The words "powerful," "fun," or "angry," for survey participants, may be too general, lacking details to help them recall their experience. For example, a participant may have been angry because someone provoked her/him before, and s/he wanted to show the bully/ies that s/he is more powerful. In this situation, this participant may have had equal opportunity to choose power and fun; however, these two motives are fundamentally different. Thus, more detailed explanation of the motives used in measurements is necessary.

Uses and Gratifications of Social Media

The uses and gratifications theory (U&G) posits that individuals actively seek certain media to satisfy their psychological needs (Katz, Blumler, & Gurevitch, 1974). The greater the need, the more attention an individual devotes to media consumption. There are five basic

assumptions in the U&G theory (McLeod & Becker, 1981; reviewed by Ancu & Cozma, 2009). First, the audience is active. Second, the audience media use is goal-oriented. Third, media consumption gratifies different audience needs or motives, (e.g., entertainment, escape, information, education). Fourth, people have enough self-awareness to know and clarify their reasons for using certain media. Finally, U&G has its origins in media content, exposure, and the context in which the exposure takes place (Ancu & Cozma, 2009). Though not all media consumption requires an active audience, the Internet requires participation for use. Thus, Internet audiences are more aware and goal-oriented when they use media on this forum (Rubin, 1984, 1994; Ruggiero, 2000; Severin & Thankard, 1997; Windahl, 1981; LaRose & Eastin, 2004, Lin & Jeffres, 1998; Ancu & Cozma, 2009). Current Internet audiences are so active that studies adopting U&G theory usually refer to them as “users”, instead of “audiences” (Sundar & Limperos, 2013). The majority of U&G research confirms strong associations between media selection and the gratifications users seek (Ancu & Cozma, 2009; Haridakis & Hansen, 2009; Papacharissi & Rubin, 2000). For example, Ancu and Cozma (2009) identified that the need for interaction was the most important gratification for people who visited MySpace candidate profiles. Papacharissi and Rubin (2000) identified several gratifications for Internet use, such as interpersonal reasons, passing time, information seeking, convenience, and entertainment. Haridakis and Hansen (2009) confirmed similar gratifications when examining viewers of YouTube videos.

In Sundar and Limperos (2013) review of U&G, they posited that besides “content gratifications” (obtained from media content) and “process gratifications” (from using media) (Rubin, 2009), there is an additional third gratification, which is related to the use of media as a social environment (Stafford, Stafford, & Schkade, 2004). This third media-related gratification

is developed by the characteristics of media themselves rather than users' pre-existing needs (Sundar & Limperos, 2013). For example, Twitter users considered a need for connection behind their Twitter usage; and this need developed from long-time usage of Twitter, rather than a pre-existing need (Chen, 2011). In other words, the more time a person used Twitter, the more he or she gratified this need for connection. Ezumah (2013) examined the U&G of four social media: Facebook, Twitter, MySpace, and LinkedIn, and results showed that people enjoy Facebook the most because it gratifies users with its ease of navigation, user-friendliness, popularity, interactivity, universal scope, and eclectic set of possible functions. Pai and Arnott (2013) further identified four main gratifications that people obtained from social media—belonging, hedonism, self-esteem, and reciprocity. Some other gratifications of social media include personal identity enhancement (Joinson, 2008) and photo sharing (Ezumah, 2013; Joinson, 2008).

U&G and Problem Behaviors

While the original U&G theory focused on personal needs and media use, later research shifted the attention to their antecedents—personality characteristics, the relationship between personality characteristics and media use motives, and how these motives influenced the media use (Greene & Krcmar, 2005). In addition, Greene and Krcmar (2005) concluded that research concentrating on these aspects of U&G falls in one of three categories: using personality characteristics to explain the uses of certain types of media (Finn, 1997), to examine media use motives (Conway & Rubin, 1991), and to explain the uses of certain media content (Krcmar & Greene, 1999; Slater, 2003; Weaver, 1991). For example, Finn (1997) found that the openness to new experiences was positively associated with pleasure reading, such as novels.

Moreover, some personality characteristics that motivated negative media uses (e.g., violent content), in fact, also motivated individuals' problem behaviors. For example, sensation

seeking predicts both the consumption of violent content (Krcmar & Greene, 1999) and aggressive behavior (Zuckerman, 1994). However, certain personality characteristics were cultivated by media use. For example, some media effects research showed that exposure to violent content can cause aggressive behavior (Donnerstein, Slaby, & Eron, 1994; Paik & Comstock, 1994). It seems that there is a cycle between media and personality: media exposure cultivates personality, personality creates personal needs, and needs motivate media choice of exposure. Krcmar and Greene (2005) argued that the violence on television caused increases in aggressive personality, while aggressive personalities shape individuals' interest or need in media consumption depicting violence. Finally, they suggested that individuals may seek aggression (gratifications sought) by violent media use, but may not be satisfied (gratifications obtained) by those forms of media (Krcmar & Greene, 2005). If this is the case, what can gratify them? May be the exact aggressive behavior. If television cannot fully gratify those individuals' aggressive personalities and related aggression needs, it seems possible that the Internet can serve as a possible outlet, since the Internet, as an interactive media, can combine the media use and behavioral functions together.

U&G and Cyberbullying Behaviors

Cyberbullies are users of the Internet, and based on previous research of their motives, they are active and goal-oriented, which meet the assumptions of the audience in U&G. Using U&G to infer the motives of cyberbullies' selection of the Internet may offer a new perspective to the motives research and contribute more evidence to explain previous inconsistent results. Though research has shown that individuals' personality factors are related to violent media use (Krcmar & Greene, 2005), it also suggested that environment shaped personality. Thus, this study is more interested in examining how previous experience of cyberbullies influences their

media use. This study also focuses on cyberbullies' use of media type rather than their media content choices, in an effort to understand why cyberbullies choose the Internet rather than face-to-face interactions.

There are several special characteristics of Internet use: anonymity, wider audiences, fewer limitations to time and space, less feedback, and less supervision. However, the lowered limitations on time and space and the wider audiences are linked factors, because greater access can lead to a bullying message reaching larger amount of audiences in a short time. Thus, the current study takes the function of these two traits as the same. As for less feedback and less supervision, as they are both related to anonymity, this study will focus on anonymity to be inclusive of both factors. More broadly, the current study aims to examine what needs cyberbullies seek to gratify through these traits of Internet use (anonymity and wider audience reach).

Anonymity gratifies the need for reactive aggression motives

One characteristic of bullying is the imbalance of power. Sijtsema, Veenstra, Lindenberg, and Salmivalli (2009) proposed that one motivation for bullying is maintaining social status and power. In traditional face-to-face bullying, this power imbalance can be maintained by difference in physical strength (Vanderbosch & Van Cleemput, 2008); however, in the context of cyberspace, the anonymity undermines this kind of physical imbalance. Some studies re-conceptualized this imbalance in cyberspace, and proposed that the difference in computer knowledge and skills (i.e., online power) provides the imbalance in cyberbullying (Erdur-Baker, 2010). However, Barlett et al. (2016) tested this concept of online power in cyberbullying and found that it could not significantly predict cyberbullying behavior; on the contrary, the lack of concern about the strength differential predicted cyberbullying behavior. It is reasonable to infer

that people realized that the traditional imbalance can be weakened, and even be eliminated, by the online nature of cyberbullying; thus physically weaker young adults are able to bully others online. Though bullies in face-to-face bullying may also be the cyberbullies, the anonymity of cyber media provides an opportunity for victims in face-to-face bullying to retaliate on cyberspace. Under these circumstances, the anonymity of cyber media gratifies cyberbullies' motive of reactive aggression (e.g., retaliation, anger, and rage), and this kind of cyberbullies are more likely coming from the victims in face-to-face bullying.

Wider audiences/bystanders gratify instrumental aggression motives

A bullying triad consists of bully, victim, and bystander. Bystanders' interventions, such as providing emotional or behavioral support to victims, can have a positive effect; however, they often remain passive or even join in bullying (Barlinska, Szuster, & Winiewski, 2013; Shultz, Heilman, & Hart, 2014; Machackova, Dedkova & Mezulanikova, 2015). "Silent" bystanders can be the "invisible engine in the cycle of bullying" (Twemlow, Fonagy, Sacco, Gies, & Hess, 2001), because the mere presence and attention of bystanders provides at least "tacit support," causing the bully to perceive that he/she is not acting entirely alone (Benzmiller, 2013). This "silence" may be explained by the so-called bystander effect, a term used to describe occurrences for which, as the number of witnesses increases, the probability that help will be offered decreases, because of the diffusion of responsibility, pluralistic ignorance, and/or audience inhibition (Latane & Darley, 1970). Recently, Obermaier, Fawzi, and Koch (2014) observed the bystander effect in cyberbullying incidents. This study designed fictional conversations on Facebook by displaying different numbers of views. By following up this study, Machackova et al. (2015) conducted research by asking the adolescents who had

witnessed an actual cyberbullying incident about different contexts and reactions, and the results also support the presence of the bystander effect in cyberbullying.

Fewer time and space limitations on cyberbullying may result in a bullying message reaching a larger audience in a short amount of time. This larger number of bystanders has severe effects on cyberbullying. A bystander audience in cyberspace can play an active role in cyberbullying without creating a text or image; participants can easily forward the bullying message to even wider audiences (Spears, Slee, Owens, & Johnson, 2009; Barlinska, 2013). In this way, they indirectly support the cyberbullies. Benamiller (2013) posited that bystanders who keep silent in bullying contribute to the bully's power and the victim's isolation. The bully will only do what the bystander social group allows (Twemlow & Sacco, 2013); thus, on the Internet, the cyberbullies may feel larger bystander audience "allow" and "support" their behavior. Salmivalli, Voeten and Poskiparta (2011) tested the bystanders effect with bully, and found that the effect of reinforcing bullying behavior was positive and strongly associated with the frequency of bullying. The researchers pointed out that bullies often carefully select their targets and the setting of a bullying behavior to maximize the demonstration of power, and in these settings, bystanders can seem to provide support (Salmivalli et al., 2011). In online spaces, the larger number of bystanders can provide more "power" to bullies. Thus, from this perspective, cyberbullies actively select cyberspace as their bullying setting, and its larger audience gratifies these bullies' motives for power. This kind of need for power of cyberbullies parallels that of traditional face-to-face bullies; thus, it is possible that for the cyberbully who is also a bully in face-to-face bullying, online media are more likely to gratify his/her motives for power. Overall, it is likely that the wider audience of the Internet gratifies the cyberbullies' motives of

instrumental aggression (e.g., power, affiliation, and fun), and this kind of cyberbullies are more likely coming from the bullies in face-to-face bullying

Based on the previous analysis, two sets of hypotheses are examined in this paper.

Hypothesis 1a (H1a): A cyberbully with more victim experience in face-to-face bullying would be more likely to gratify reactive motives (e.g., retaliation, anger, and rage) than instrumental motives (e.g., power, affiliation, and fun) through cyberbullying behavior.

Hypothesis 1b (H1b): The reactive motives of cyberbullies are more likely to be gratified by the Internet's anonymity than by its wider audience.

Hypothesis 2a (H2a): A cyberbully with more bully experience in face-to-face bullying would be more likely to gratify instrumental motives (e.g., power, affiliation, and fun) than reactive motives (e.g., retaliate, anger, and rage) through cyberbullying behavior.

Hypothesis 2b (H2b): The instrumental motives of cyberbullies are more likely to be gratified by the Internet's wider audience than by its anonymity.

To illustrate the relationship between hypotheses, H1a, H1b, H2a and H2b are depicted in the hypothesized structural model (see Figure 1).

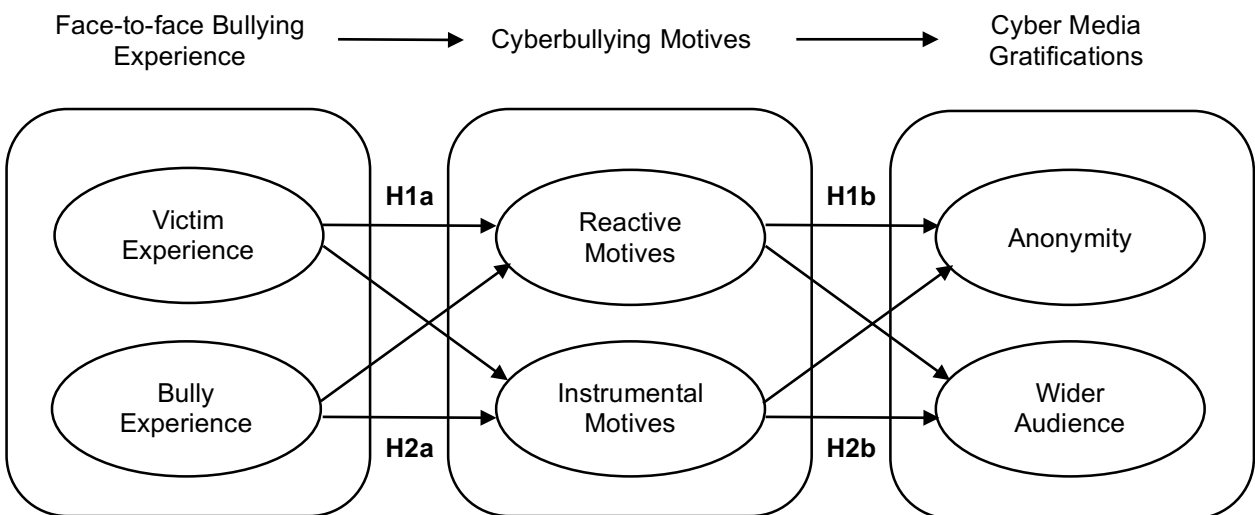


Figure 1. Hypothesized structural model.

CHAPTER 3

METHOD

Participants and Procedure

To test the hypotheses, we conducted a survey in a Midwestern US university, communication classes in that University and on Amazon Mechanical Turk (MTurk). It initially seemed appropriate select middle school and high school students as the participants of this survey, as previous research shown that the cyberbullying mainly occurs during preadolescence and adolescence (Hinduja & Patchin, 2008; Smith et al., 2008; Ybarra & Mitchell, 2004). However, considering that students under 18 years old may not cognitively realize if they are acting out cyberbullying behavior, it is more appropriate to ask young adults to recall their middle school and high school experiences. Except for cognitive maturity, young adults are distant from their middle- and high-school life. This dissociation can create more objectivity. Thus, university students, including graduate students, were chosen to survey. For the MTurk, we limited the age range to the same ages as the university student participants (18 to 36 years old). A survey was created on Qualtrics, a web-based survey website, and invitations were e-mailed to all the college students. Students could participate freely by clicking the survey link in the e-mail, and were then directed to the survey webpage, where an IRB-approved questionnaire, including a consent form and instructions, was presented. After the students submitted the survey, they were redirected to a separate form to enter contact information for an incentives drawing. As for the communication classes students, survey links were posted on the class forum, and students could participate freely. After they submitted the survey, they were redirected to another separate form to provide their contact information to receive class credit.

After screening the information provided by the university students and the class students, no repeated information was found, which means it is less possible that one student took the same survey twice to get both class credit and gift card. A similar procedure was conducted in MTurk. A brief description of the survey, reward, time allotted for each assignment, and the survey link were post on the survey request page. All the “workers” on Amazon could freely participate by clicking the survey link, and were directed to the survey created on Qualtrics. After submitting the survey, participants received an incentive code.

Data collection started on March 30, 2016, and ended at midnight on April 8, 2016. The survey invitation e-mail reached out to about 36,000 students in this university. In total, 948 students (189 students from communication classes) completed the survey. The response rate was 2.63%. This response rate, though low, is not an extremely low for an online survey (Winner & Dominick, 2014). Including the responses on MTurk, there were 1,217 completed survey responses in total. Since this study focuses on participants who have engaged in cyberbullying behavior, after eliminating the irrelevant data, 351 responses were kept as the study sample. Out of the initial 1,217 respondents, almost 28.84% admitted they had engaged in cyberbullying. The remaining sample size (351) is good to produce reliable sample estimates in multivariate studies (Wimmer & Dominick, 2014). The survey response rate on MTurk could not be estimated.

Measurement

The survey included four sections: demographics, face-to-face bullying experience, cyberbullying experience and motives. After completion the informed consent, participants first went to the demographics section. This section included seven questions asking about gender, age, education, religion, etc. The sections of face-to-face bullying experience and cyberbullying

experience included questions about victim experience and bully experience. The motives section was distributed under each bully experience question.

Independent variables

Victim experience in face-to-face bullying (FV). The first independent variable in this study refers to the degree of victim experience in previous face-to-face bullying. This was measured by an eight-item index developed from Olweus Bullying Questionnaire (OBQ; Olweus, 2010). The index measured participants' degree of victim experience by asking them to rate the frequency of each item on a seven-point scale (1=never, 7=almost every day). The items included, but were not limited to, "I was repeatedly called mean names, was made fun of, or teased in a hurtful way," "I had money or other things taken away from me or damaged," and "I was threatened or forced to do things I did not want to do." The last item was an open answer question: "I was bullied face-to-face in another way. (Please specify)," in which participants indicated and rated the frequency of another victim situation that they experienced but was not included in the previous items. The internal consistency reliability (Cronbach's alpha) of this index was .900; thus, participants' responses to these eight items were averaged to form one general index of victim experience in face-to-face bullying.

Bully experience in face-to-face bullying (FB). The second independent variable refers to the degree of bully experience that a participant conducted in previous face-to-face bullying. This was also measured by an eight-item index from OBQ (Olweus, 2010). As with the victim experience index, the index measured participants' degree of bully experience by rating the frequency of each item on a seven-point scale (1=never, 7=almost every day). The items included, but were not limited to, "I kept other student(s) out of things on purpose, excluded them from my groups of friends, or completely ignored them," and "I hit, kicked, pushed, and

shoed other student(s) around, or locked them indoors.” The last item was an open answer question: “I bullied other student(s) face-to-face in another way. (Please specify),” in which participants indicated and rated the frequency of another bullying behavior they performed that was not included in the previous items. The difference from the set of victim experience questions is that in the victim experience set, the eight items are loaded under the same question (See questionnaire Q8); while the eight items measuring bullying behavior were distributed into eight different questions (Q10, Q11, Q14, Q17, Q20, Q23, Q26, and Q29). This is because after each item/question, two questions about bullying motives were presented if the score on the previous item/question was in the range of 2 through 7. The internal consistency reliability (Cronbach’s alpha) of this index was .907; thus, participants’ responses to these eight items were averaged to form one general index of bully experience in face-to-face bullying, sharing the same scale as the individual items.

Cyberbully experience. This third independent variable in fact operates as a filter. By using this filter, the study eliminated responses in which the participants indicated they did not previously engage in cyberbullying behavior, and kept all the responses which included different degrees of cyberbully experience (351 responses in total). Cyberbullying experience was measured by an eight-item index developed from an electronic bullying questionnaire (EBQ; Kowalski & Limber, 2007). The index measured participants’ degree of cyberbullying experience by rating the frequency of each item on a seven-point scale (1=never, 7=almost every day). The items included, but were not limited to, “I sent/posted/forwarded mean or hurtful messages, pictures, comments to other student(s) on the Internet (Such as using social networks or starting a website to post),” and “I posted messages/photos/videos about other student(s) on the Internet without their permission (e.g., posting someone’s e-mail on the Internet which was

supposed to be confidential).” The last item was an open answer question: “I cyberbullied other student(s) in another way. (Please specify),” in which participants indicated and rated the frequency of other cyberbullying behavior that they performed but was not included in the list of previous items. As with the index for face-to-face bullying experience, the eight items measured cyberbullying behavior were distributed into eight different questions (Q35, Q36, Q39, Q42, Q45, Q48, Q51, and Q54). After each question, two questions about the cyberbully’s motives were presented if the score on the previous question was in the range of 2 through 7. The internal consistency reliability (Cronbach’s alpha) of this index was .936; thus, participants’ responses to these scales were averaged to form one general index of cyberbully experience, which shared the same scale as the individual items.

Dependent Variables

Reactive motives of cyberbullying refer to cyberbullying motives caused by a reaction to a provocation, threat, or frustration, which included retaliate, anger, and rage (Gradinger et al., 2011; Warburton & Anderson, 2015). Reactive motives measured by four items drawn from previous literature (e.g., Gradinger et al., 2011). Responses for each item were measured on a seven-point scale (1=completely disagree, 7=completely agree). When the participants indicated they performed cyberbullying behavior in previous cyberbully experience questions, they were directed to the relative motives question.

Instrumental motives of cyberbullying refer to cyberbullying motives to benefit the perpetrator by harming another with a considered and deliberate plan, including power, affiliation, and fun (Gradinger et al., 2011; Warburton & Anderson, 2015). This variable was measured by three items, drawn from previous literature (e.g., Gradinger et al., 2011), and on a

seven-point scale. As with reactive motives, only participants who admitted to previous cyberbullying behavior would be directed to see the following motive questions.

Initially, nine items related to reactive motives and instrumental motives were loaded under the same motive questions (Q38, Q41, Q44, Q47, Q50, Q53, and Q56). Then these nine items measuring the motives were factored by principal component analysis with varimax rotation, and based on the study purpose, two factors were forced to be extracted: reactive motives and instrumental motives. Items were assigned to a particular factor if their primary loadings were greater than 0.7, which is an acceptable level in social science research (Matsunaga, 2015). After the first rotation, seven items were kept and loaded under two factors, and the other two were eliminated because of lower correlation. Three items were loaded under Factor 1 (instrumental motives) and the other four items were loaded under Factor 2 (reactive motives). Factors 1 and 2 cumulatively accounted for 94.52% of the variance in motives (see Table 1). Specifically, the instrumental motives factor has an eigenvalue of 3.195, accounting for 45.65% of the variance; its loaded items have a Cronbach's alpha of .977. The reactive motive factor has an eigenvalue of 3.42, accounting for 48.88% of the variance, and its loaded items have a Cronbach's alpha of .976. Based on this factor analysis, two new variables, instrumental motive and reactive motive, were formed by calculating the mean score of all items loaded under each factor. After recoding, the two new variables were also scored on a scale of 1 (completely disagree) to 7 (completely agree). Table 1 shows all items for each factor. Since a set of motive questions followed each cyberbully experience item, all the reactive motives and instrumental motives were summed and averaged respectively to form the two general variables, *reactive motives* and *instrumental motives*. Their scales are the same as the individual items.

Table 1
Factor Analysis for Motives of Cyberbullying Behavior

| I did cyberbullying because... | Factors | |
|--|---------|--------|
| | 1 | 2 |
| Factor 1: Instrumental Motives | | |
| It was fun and cool. | .842 | |
| Other student praised me when I did that. | .802 | |
| I did it to demonstrate I was more powerful. | .740 | |
| Factor 2: Reactive Motives | | |
| I did it because he/she/they bullied me before. | | .828 |
| I did it to defend myself. | | .823 |
| I reacted angrily when provoked by others. | | .757 |
| I did it to help others to defend against attacks. | | .715 |
| Eigenvalue | 3.20 | 3.42 |
| Reliability | .977 | .976 |
| Variance explained | 45.646 | 48.878 |

Note. N=351.

Internet gratifications—Anonymity refers to the degree that the Internet’s anonymous nature gratifies the cyberbully’s motives (both reactive motives and instrumental motives). This variable was measured by an item included among the motive questions: “No one would know I did it and I wouldn’t get caught.” As with the motive items, responses were measured on a seven-point scale (1=completely disagree, 7=completely agree). This item scores for each motive questions were summed and averaged to form a new variable called *anonymity*, also on the scale of 1 through 7.

Internet gratifications—Wider audience refers to the degree that the Internet’s potentially larger audience gratifies the cyberbully’s motives (both reactive motives and instrumental motives). This variable was measured by an item included among the motive questions: “I felt a lot of people online were watching me; I did not want to lose face.” Responses were measured on a seven-point scale; items for each motive question were added and averaged to form a new variable *wider audience*, scored on the 1 through 7 scale.

CHAPTER 4

RESULTS

Sample Overview

Comparing sample characteristics can help to determine the validity of a survey (Poindexter & McCombs, 2000), so an overall description of the sample is presented in Table 2 and Table 3. The student sample and MTurk sample are listed separately in both tables.

Table 2
Demographics Overview

| | Student | MTurk | Total |
|----------------------|---------|-------|--------------|
| Cyberbully | 252 | 99 | 351 |
| Only FV | 12 | 7 | 19 (4.41%) |
| Only FB | 12 | 1 | 13 (3.7%) |
| Both FV & FB | 225 | 91 | 316 (90.03%) |
| Neither | 3 | 0 | 3 (0.85%) |
| Gender | | | |
| Male | 93 | 63 | 156 (44.4%) |
| Female | 157 | 36 | 193 (55%) |
| Prefer not to answer | 2 | 0 | 2 (0.6%) |
| Age | | | |
| 18-23 | 228 | 22 | 250 (71.2%) |
| 24-36 | 24 | 77 | 101 (28.8%) |
| Race | | | |
| White/Caucasian | 204 | 28 | 232 (66.1%) |
| Asian-American | 11 | 35 | 46 (13.1%) |
| Others | 37 | 36 | 73 (20.8%) |
| Religion | | | |
| No religion | 80 | 16 | 96 (27.4%) |
| Christian | 89 | 23 | 112 (31.9%) |
| Catholic | 61 | 7 | 68 (19.4%) |
| Hindu | 4 | 39 | 43 (12.3%) |
| Others | 18 | 14 | 32 (9%) |
| Birth | | | |
| With siblings | 234 | 90 | 324 (92.3%) |
| Only child | 18 | 9 | 27 (7.7%) |

Notes. N=351. Cells display counts of each category with percentages in parentheses in total column.

Table 3
Online Activities: Mean Values and Standard Deviations

| | Student | MTurk | Total |
|-----------------|---------|-------|-------|
| Online video | | | |
| <i>M</i> | 5.67 | 5.34 | 5.58 |
| <i>SD</i> | 1.62 | 1.65 | 1.63 |
| Social network | | | |
| <i>M</i> | 5.82 | 4.96 | 5.58 |
| <i>SD</i> | 1.66 | 1.95 | 1.79 |
| Instant message | | | |
| <i>M</i> | 4.54 | 4.76 | 4.60 |
| <i>SD</i> | 2.22 | 1.81 | 2.11 |
| Online shopping | | | |
| <i>M</i> | 3.98 | 4.86 | 4.23 |
| <i>SD</i> | 1.91 | 1.65 | 1.88 |
| Online game | | | |
| <i>M</i> | 2.99 | 4.67 | 3.46 |
| <i>SD</i> | 2.11 | 1.77 | 2.16 |
| Forum/Blog | | | |
| <i>M</i> | 2.54 | 4.13 | 2.99 |
| <i>SD</i> | 2.03 | 1.88 | 2.11 |
| Chartroom | | | |
| <i>M</i> | 2.00 | 4.04 | 2.58 |
| <i>SD</i> | 1.72 | 1.97 | 2.02 |
| Q&A website | | | |
| <i>M</i> | 1.90 | 4.01 | 2.50 |
| <i>SD</i> | 1.45 | 2.06 | 1.90 |

Notes. $N=351$.

For the 351 total participants, 156 (44.40%) were male and 193 (55%) were female, and two participants preferred to not answer. 71.4% of the participants were 18-23 of age; while 28.6% were between 24 and 36. The race/ethnicity of the participants were largely White/Caucasian (66.1%), followed by Asian-American (13.1%). Participants' main religions for this sample were Christianity (non-Catholic) (31.9%), Catholicism (19.4%), and Hinduism (12.3%); 27.4% of the participants had no religion. 92.3% of participants had siblings, 30.2% are the oldest children, 25.4% are middle children, and 36.8% are the youngest children; only 7.7% are the only child.

For the online activities, which were measured by a seven-point frequency scale, from 1 (rarely) to 7 (frequently), the activities with the highest mean scores were watching videos ($M=5.58$, $SD=1.63$) and social network use ($M=5.58$, $SD=1.80$), followed by sending instant messages ($M=4.60$, $SD=2.11$), online shopping ($M=4.23$, $SD=1.88$), playing online games ($M=3.46$, $SD=2.16$), and forum discussions ($M=2.99$, $SD=2.11$). Among the 351 participants, who had engaged in cyberbullying at least once, 19 (5.41%) of them reported victim-only status in previous face-to-face bullying, 13 (3.70%) reported bully-only status in face-to-face bullying, 3 (0.85%) of them reported no bully or victim experience, and 316 (90.03%) had both bully and victim experience in face-to-face bullying.

Hypothesis 1a and 2a

Hypothesis 1a and Hypothesis 2a were both confirmed that a cyberbully with more victim experience in face-to-face bullying would be more likely to gratify reactive motives than instrumental motives through cyberbullying behaviors; while a cyberbully with more bully experience in face-to-face bullying would be more likely to gratify instrumental motives than reactive motives. Two multivariate hierarchical regressions were employed to examine FV and FB as predictors of reactive motives and instrumental motives of cyberbullying, respectively. The variance inflation factor (VIF) for each variable in collinearity statistics was less than 2, which showed no evidence of a serious multicollinearity problem in these regression analyses (e.g., Rogerson, 2001).

Table 4 reports the statistics associated with the prediction of reactive motives of cyberbullying. The demographics together accounted for 31.1% of the variance in reactive motives of cyberbullying, with individuals with siblings being the only demographic variable to make a small but significant contribution to the prediction of reactive motives ($\beta = .06$, $p < .05$).

The addition of online activity variables to the equation made a small but significant additional contribution, 9.7%, with no single variable to make a significant independent contribution to the prediction. The addition of face-to-face bullying experience variables to the equation improved prediction by 33.3%, to 74%, with both FV ($\beta = .15, p < .05$) and FB experience ($\beta = .69, p < .001$) making significant contributions to the prediction of reactive motives; while the FB experience is a stronger predictor, compared with the FV experience.

Table 4

Result of Multivariate Hierarchical Regression Analysis for Predictors of Reactive Motives of Cyberbullying Behaviors (N=351)

| Step/Predictor | R^2 | ΔR^2 | $F (df)$ | B | β | p |
|-----------------------|-------|--------------|-------------|------|---------|--------|
| 1. Demographics | .311 | .311 | 21.96 (341) | | | < .001 |
| Gender | | | | .09 | .04 | .279 |
| Age | | | | .01 | .03 | .406 |
| Race White | | | | -.00 | .00 | .995 |
| Race Asian-American | | | | .14 | .04 | .204 |
| Religion Christian | | | | -.05 | -.02 | .528 |
| No Religion | | | | -.16 | -.06 | .078 |
| With siblings | | | | .26 | .06* | .049 |
| 2. Online activity | .408 | .097 | 15.28 (333) | | | < .001 |
| Chatroom | | | | -.00 | -.01 | .887 |
| Instant message | | | | .03 | .05 | .148 |
| Online game | | | | .01 | .02 | .693 |
| Online shopping | | | | .03 | .05 | .144 |
| Online video | | | | -.01 | -.01 | .721 |
| Social network | | | | .02 | .03 | .352 |
| Q&A Website | | | | .02 | .03 | .536 |
| Forum/Blog | | | | -.01 | -.02 | .639 |
| 3. FV & FB experience | .740 | .333 | 55.55 (331) | | | < .001 |
| FV Experience | | | | .14 | .15*** | < .001 |
| FB Experience | | | | .68 | .69*** | < .001 |

Notes. * $p < .05$. ** $p < .01$. *** $p < .001$. Durbin-Watson test = 1.702.

For Gender, male was coded as 0, and female was coded as 1. For Race White, White was coded as 1, and all others code as 0. For Race Asian-American, Asian-American was coded as 1, and all others were coded as 0. For religion Christian, Christian was coded as 1, and all others were coded as 0. For No religion, No religion was coded as 1, and all others were coded as 0. For Individual with siblings, the with siblings was coded as 1, and only-child was coded as 0.

Table 5 reports the statistics associated with the prediction of instrumental motives of cyberbullying. The demographic factors together accounted for 30.9% of the variance in

instrumental motives of cyberbullying, with individuals with siblings being the only demographic factor to make a small but significant contribution to the prediction of instrumental motives ($\beta = .08, p < .01$). Online activity factors overall made a small but significant contribution, 10.7%, though the examined factors made no significant contribution. The addition of face-to-face bullying experience variables to the equation improved prediction by 34%, to 75.6%, with both FV experience ($\beta = .09, p < .01$) and FB experience ($\beta = .74, p < .001$) making significant contributions to the prediction of instrumental motives; while FB experience is a stronger predictor, compared with FV experience.

Table 5
Result of Multivariate Hierarchical Regression Analysis for Predictors of Instrumental Motives of Cyberbullying Behaviors (N=351)

| Step/Predictor | R^2 | ΔR^2 | $F (df)$ | B | β | p |
|-----------------------|-------|--------------|-------------|------|---------|--------|
| 1. Demographics | .309 | .309 | 21.75 (341) | | | < .001 |
| Gender | | | | .05 | .02 | .508 |
| Age | | | | .00 | .01 | .751 |
| Race White | | | | -.02 | -.01 | .847 |
| Race Asian-American | | | | .07 | .02 | .593 |
| Religion Christian | | | | -.10 | -.04 | .230 |
| No Religion | | | | -.14 | -.05 | .133 |
| With siblings | | | | .37 | .08** | .006 |
| 2. Online activity | .416 | .107 | 15.79 (333) | | | < .001 |
| Chatroom | | | | .03 | .05 | .231 |
| Instant message | | | | -.00 | -.00 | .952 |
| Online game | | | | -.01 | -.01 | .791 |
| Online shopping | | | | .02 | .02 | .470 |
| Online video | | | | -.03 | -.04 | .206 |
| Social network | | | | .01 | .02 | .543 |
| Q&A Website | | | | .01 | .02 | .658 |
| Forum/Blog | | | | .01 | .01 | .765 |
| 3. FV & FB experience | .756 | .340 | 60.27 (331) | | | < .001 |
| FV Experience | | | | .09 | .09** | .009 |
| FB Experience | | | | .75 | .74*** | < .001 |

Notes. ** $p < .01$. *** $p < .001$. Durbin-Watson test = 1.882.

For Gender, male was coded as 0, and female was coded as 1. For Race White, White was coded as 1, and all others code as 0. For Race Asian-American, Asian-American was coded as 1, and all others were coded as 0. For religion Christian, Christian was coded as 1, and all others were coded as 0. For No religion, No religion was coded as 1, and all others were coded as 0. For individual with siblings, the with siblings was coded as 1, and only-child was coded as 0.

Comparing these two tables (Table 4 and 5), FV experience was more likely to predict the reactive motives, because its relationship with reactive motives was stronger and more significant than with instrumental motives of cyberbullying ($\beta = .15 > \beta = .09$). Similarly, the FB experience was more likely to predict the instrumental motives because its relationship with instrumental motives was stronger than with reactive motives ($\beta = .69 < \beta = .74$). However, it is noteworthy to mention that, to both kinds of cyberbullying motives, FB experience was a stronger predictor than FV experience. The siblings factor played almost equally important roles in prediction of both reactive and instrumental motives, with slightly stronger prediction in the latter one ($\beta = .06 < \beta = .08$).

Hypothesis 1b and 2b

Hypothesis 1b and 2b posited that reactive motives of a cyberbully's are more likely to be gratified by the Internet's anonymity than its wider audience; while instrumental motives of a cyberbully's are more likely to be gratified by the Internet's wider audience than its anonymity, were both not confirmed, and presented a minor opposite trend. Two multiple regressions were conducted to examine the reactive motives and instrumental motives of cyberbullying as predictors of gratifications of the Internet's anonymity and its availability of wider audience, respectively. The VIF for each variable was between 9 to 10, implying there was a problem of multicollinearity, which indicated inflation existed in the variance of the estimated regression coefficients. Though this level of VIF is acceptable in some literature (e.g., Hair, Anderson, Tatham, & Black, 1995; Kennedy, 1992), the current study still cautiously dealt with the inflated beta weights because the VIF is close to the maximum acceptance level, 10.

Table 6 reports the statistics associated with the prediction of the gratification of the Internet's anonymity. The whole model accounts for a significant portion of the variance in the

gratification of the Internet's anonymity, $F(2, 348) = 1526.51$, $Adjusted R^2 = .897$, $p < .001$. The gratification of the Internet's anonymity was significantly positively predicted by both reactive motives ($\beta = .22$, $p < .001$) and instrumental motives of cyberbullying ($\beta = .74$, $p < .001$); while instrumental motives of cyberbullying is a stronger predictor than reactive motives.

Table 7 reports the statistics associated with the prediction of the gratification of the Internet's availability of wider audience. Together, reactive motives and instrumental motives of cyberbullying account for a significantly large portion of the variance in the gratification of the Internet's wider audience, $F(2, 348) = 2438.20$, $Adjusted R^2 = .93$, $p < .001$. The gratification of the Internet's wider audience was weakly but significantly positively predicted by reactive motives of cyberbullying ($\beta = .25$, $p < .001$), and strongly positively predicted by instrumental motives of cyberbullying ($\beta = .73$, $p < .01$).

Table 6

Result of Multiple Regression Analysis for Predictors of the Gratification of the Internet's Anonymity (N=351)

| | <i>B</i> | <i>SE B</i> | β | <i>t</i> | <i>p</i> |
|---------------------------------------|----------|-------------|---------|----------|----------|
| Reactive Motives of Cyberbullying | .23 | .06 | .22*** | 4.260 | < .001 |
| Instrumental Motives of Cyberbullying | .75 | .05 | .74*** | 14.134 | < .001 |

Notes. $F(2, 348) = 1526.51$, $Adjusted R^2 = .897$, $p < .001$.

*** $p < .001$

Table 7

Result of Multiple Regression Analysis for Predictors of the Gratification of the Internet's Wider Audience (N=351)

| | <i>B</i> | <i>SE B</i> | β | <i>t</i> | <i>p</i> |
|---------------------------------------|----------|-------------|---------|----------|----------|
| Reactive Motives of Cyberbullying | .27 | .05 | .25*** | 5.971 | < .001 |
| Instrumental Motives of Cyberbullying | .76 | .04 | .73*** | 17.294 | < .001 |

Notes. $F(2, 348) = 2438.198$, $Adjusted R^2 = .933$, $p < .001$.

*** $p < .001$

From Table 6 and Table 7, reactive motives of cyberbullying were more likely to be gratified by the Internet's wider audience than its anonymity ($\beta = .25 > \beta = .22$); while instrumental motives of cyberbullying were slightly more likely to be gratified by anonymity than wider audience of the Internet ($\beta = .74 < \beta = .73$). However, the beta weights were inflated because of the problem of multicollinearity and in both case the coefficient changes were small, thus, it is reasonable to conclude that there was no significant difference between the gratification of anonymity and wider audience of the Internet to a particular kind of motives. In other words, for cyberbullies with either more reactive motives or more instrumental motives, anonymity and wider audience of the Internet equally gratified them.

The results are illustrated in Figure 2.

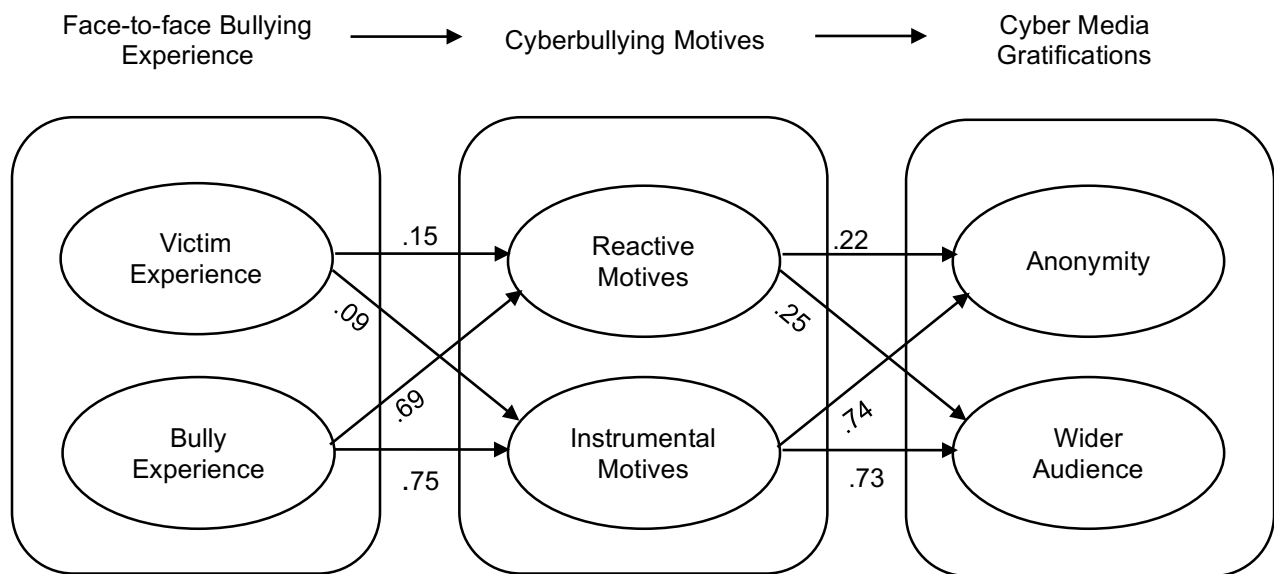


Figure 2. Structural model. The numbers on the arrow are standardized beta.

CHAPTER 5

DISCUSSION

This study explored the effects of previous face-to-face bullying experience on cyberbullies' motives, and examined the uses and gratifications of two Internet features: anonymity and wider audience. First, this study tested two possible motives for cyberbullying based on previous face-to-face bully or victim experience, and how these two kinds of motives related to the cyberbullies' actual uses of the Internet. The results of this online survey have several noteworthy findings that not only contribute to the literature on uses and gratifications, but also have practical implications for anti-cyberbullying campaigns.

First, from the overview of the sample, three points are worthwhile to look at. The first point is gender. In previous cyberbullying research, while most research has shown that boys were more involved than girls (e.g., Fanti, Demetrious, & Hawa, 2012; Salmivalli & Poyhonen, 2012), some research has shown that there are no significant differences between gender (e.g., Smith et al., 2008); other research has shown that girls were more likely to engage in cyberbullying behaviors than boys (e.g., Rivers & Noret, 2010). One of Slonje et al.'s (2013) subject's explained this third situation: "I would say that girls do it more. Well, there occurs more cyberbullying because I believe one doesn't want to be as open with what one does. One can be pretty like secretive (p. 28)." In the current study, there were more girls than boys among the participants, which appears to contribute evidence to this explanation. The second point that deserves discussion is study participants' family size; the large majority of respondents (92.3%) were born in a family with more than one child. Compared with national census data (United State Census Bureau, 2015), in which 79.56% of families have more than one child, this

percentage is fairly high. Some personality research has shown that siblings can affect children's risk-taking behavior and preference for competition, because based on Darwin's principle of divergence, siblings have to use various strategies to attract parental investment (Sulloway, 1996; Okudaira, Kinari, Mizutani, Ohtake, Kawaguchi, 2015). This may explain why most participants in the current study were from families with siblings. They are more likely to have a preference for competition and potentially aggressive personalities. The last point to notice from the results is that respondents listed their most frequent online activity as social network use, such as Facebook and Twitter. In the future studies, it is important to examine the relationship between social networks and cyberbullying, to determine if the use of social networks elicits more cyberbullying behavior (social learning theory) or if cyberbullies' needs lead them to use more social networks (U&G theory).

For the hypotheses H1a and H2a, the results verified that face-to-face victim experience predicted more reactive motives, such as retaliation, anger and rage, while face-to-face bully experience predicted more instrumental motives, such as power, affiliation, and fun. This explains why the previous research did not provide consistent results, as it did not examine cyberbullies' previous face-to-face bullying experience separately. Since previous experience can shape motives, it is necessary to analyze motives based on previous experience.

For H1b and H2b, the Internet's anonymity and wider audience did not seem to have different levels of influence on cyberbullies with different motives. These two factors both gratify the majority of cyberbullies. In other words, no matter cyberbullies' motives, the Internet's anonymity and wider audience proved equally attractive. For example, if one wanted revenge through cyberbullying, anonymity and audience were both important for him/her; the

same was true if one only conducted cyberbullying for fun. These two traits are both important in any situation, and together, gratified most the needs of cyberbullies.

In addition, when performing cross comparison of the impact of victim experience and the bully experience on the cyberbullying motives, irrespective of motives, results showed that previous victim experience is only weakly, though significantly, associated with cyberbullying behavior. In other words, when the comparison focused only on the victim experience, the victim experience predicts more reactive motives than instrumental motives, but when compared with bully experience, even for reactive motives, the victim experience is still a much weaker predictor. This contradicts some previous results, which showed that a face-to-face victim is more likely to become a cyberbully (Bernstein & Watson, 1997; Gradiner et al., 2009). However, the current results partially verify Tokunaga's (2010) claim that bullies use social media to "maximize" damage. In this study, the results showed that bullies, not victims, are the main creators of damages on the Internet, though it is not clear if they "maximize" the damage or not. It worthwhile to emphasized this result because these different results may lead to different media framing or misrepresenting in news reports. Current media reports often portray quiet, "weak" victims in face-to-face bullying as the culprits of vicious bullying in cyberspace, which gives audiences an impression that quiet people in the "real world" may turn dangerous and violent in the digital world, perhaps even more dangerous than the traditional bullies. This kind of misrepresentation can lead to harmful consequences, such as discrimination or less empathy towards the victims in face-to-face bullying, while underestimating the damage that a real world bully may create on the Internet. In the current results, regardless of aggressive motives, the face-to-face bully experience is a far stronger predictor of cyberbullying than victim experience.

Moreover, the Internet's opportunities for anonymity and a wider audience not only gratify cyberbullies' needs for media use, but also provide convenience to conduct their cyberbullying behavior. Greene and Kremer's (2005) research found that individuals with aggression-seeking needs will try to use violent television to gratify their needs, but this use may not leave them fully satisfied. Can the Internet gratify them more? In the present study, disregards of specific content, the Internet seems more likely to provide a convenient and effective spot (anonymous and of wider audience) to aggressive behavior, because these two Internet (spot) features (anonymity and wider audience) were largely accounted for by two cyberbullies' motives (reactive and instrumental), 89.7% and 93.3% respectively. Thus, it seems that the Internet gratify the aggression-seeking individuals more than television violent content, because it provides them violent spot, not simply violent content. Also, the Internet seems gratify those aggression-seeking individuals more than traditional face-to-face bullying does, because it provides them a convenient and effective spot. In other words, the Internet not only provides the type of content gratifications, but also provides practical behavior gratification. In the future, the uses and gratification theory can be used to focus more specifically on gratifications of practical behavior.

In addition to contributing to research on uses and gratification theory and bullying behavior, this study also has practical implications for anti-cyberbullying campaigns. Since the results showed that previous face-to-face experience can strongly predict cyberbullying behavior, the prevention of face-to-face bullying can also contribute to the prevention of cyberbullying. If we take into account the different experiences in face-to-face bullying, targeted anti-cyberbullying campaigns aimed to particular audiences may also be more effective. To be specific, if an anti-cyberbullying campaign is aimed at those who were victims of face-to-face

bullying, focusing on reducing reactive motives such as revenge, this may be more effective than focusing on reducing the instrumental motives, such as power. In this case, a campaign message such as “Reporting works better than revenge” may have more impact than “Bullying others shows no power, but shame”; however, for the cyberbullies who were face-to-face bullies, the latter message may be more effective.

Last but not least, as to the nature of the media itself, it may be useful to reduce cyberbullying behaviors by managing the Internet’s appeal in terms of users’ perception of anonymity or wider audiences. To decrease the users’ perception of anonymity, social media like Twitter can request more information of users, while improving privacy and security. To decrease users’ perception of wider audiences, a filtering system may work well. For example, Facebook has a function that if anyone mentions a particular user, before the post or comments appears on that user’s timeline, the user can be notified and choose if he/she allows this information to be shared on his/her timeline. If the poster is an attack, this user can simply refuse to allow the information to appear on his/her own timeline. This can help to stop potential public bullying and lessen the gratification of the cyberbullies’ need for a wider audience. However, this function only blocks the cyberbullying posts on the victim’s timeline and does not control negative posts on a cyberbully’s or others’ timelines. Thus, more effective prevention methods are needed due to the anonymity and wider audience available on the Internet.

CHAPTER 6

LIMITATIONS AND FUTURE DIRECTIONS

The main limitation of this study lies with the data set, which included both college students and the general public on MTurk, mixing different populations. The purpose of this study was to explore middle school and high school students' experiences, and it is possible that the MTurk participants did not have those school experiences. In addition, though the sampling process was random, readers should be careful when generalizing this to the larger population. For example, the sample was mainly collected from a Midwest university, with mainly White/Caucasian respondents; this result may not be generalized to other parts of the US. Moreover, this study focused on the participants' experiences of middle school and high school; with the fast development of the Internet, their experience of several years ago may not perfectly reflect current cyberbullying situations. Finally, the study sample lacks the bully-only and the victim-only participants in face-to-face bullying, making it difficult to examine the interactive impact between bully and victim experience in face-to-face bullying on cyberbullying motives. However, a multiple regression was used to compensate for this disadvantage—instead of comparing the two independent groups (FB and FV groups), this study compares two categories' (FB experience and FV experience) predictive power. Overall, this study provided important evidence to explain previous inconsistencies in cyberbullying motives research, and made a contribution to uses and gratification research by establishing the relationship between the media use of problem behavior and the Internet gratifications.

There are several possible directions for future study. While this study only examined how media type gratifies cyberbullies, future studies could also include Internet content in their

analysis of cyberbullying motives and gratifications. The current results showed that social networks and online video games are both potentially important areas of content for analysis. Second, future researchers should recruit a larger sample population to ensure bully-only and victim-only participants for comparison of the two independent groups. Third, a survey aimed at middle or high school students may reflect more recent patterns of cyberbullying. Fourth, future studies can also have an additional focus on anti-cyberbullying policy testing based on the current research results. Finally, it is worth noting that this study analyzed cyberbullies' behavior without distinguishing the different severity of their actions. It is possible that a large amount of those participants' cyberbullying behaviors were relatively minor, while only a small number of them were more severe. For example, forwarding a rumor like "He is stupid" has different severity and consequences from posting a nude image of another person without his or her permission. Those severe cyberbullying cases, like the latter case in the previous example, are worthy of more extensive investigation for prevention efforts. Thus, the future research could focus on severe cyberbullying cases and examine different motives with media's uses and gratifications.

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APPENDIX A
QUESTIONNAIRE

Demographics

1. What is your gender?

- Male
- Female
- Prefer not to answer

2. How old are you?

3. What is the highest level of education you have completed (including your current level if you are a student)?

- High School
- Freshman
- Sophomore
- Junior
- Senior
- Graduate Student
- Other

4. What religion are you?

- No religion
- Buddhist
- Catholic
- Christian
- Hindu
- Jewish
- Muslim
- Other

5. To what extent do you consider yourself a spiritual person?

[seven-point Likert-type from “not spiritual at all” to “very spiritual”]

6. What is your ethnicity?
- White/Caucasian
 - Hispanic/Latino
 - Asian-American
 - African-American
 - American Indian/Alaska Native/Pacific Islander
 - Multi-racial
 - International student (from outside the U.S.)
 - Other
7. What is your birth order in your family?
- Oldest
 - Middle
 - Youngest
 - The only child

Face-to-face Bullying Experience

Think back to your middle school and high school experiences. The next section will ask questions about what you remember about bullying. These questions focus ONLY on face-to-face bullying. Please save any examples of cyberbullying for later in the study.

8. Please rate each statement.

[seven-point Likert-type from “never” to “almost every day”]

- 1) I was bullied face-to-face during my school life.
- 2) I was repeatedly called mean names, was made fun of, or teased in a hurtful way.
- 3) Other students left me out of things on purpose, excluded me from their group of friends, or completely ignored me.
- 4) I was hit, kicked, pushed, shoved around, or locked indoors.
- 5) Other students told lies or spread false rumor about me and tried to make others dislike me.
- 6) I had money or other things taken away from me or damaged.
- 7) I was threatened or forced to do things I did not want to do.
- 8) I was bullied face-to-face in other ways. (Please specify.) _____

9. Please rate each statement.

[seven-point Likert-type from “never” to “almost every day”]

- 1) I saw other student(s) who were bullied face-to-face during my school life.
- 2) I saw other student(s) who were repeatedly called mean names, were made fun of, or were teased in a hurtful way.
- 3) I saw other student(s) who were left out of things by others on purpose, were excluded from their group of friends, or were completely ignored.
- 4) I saw other student(s) who were hit, kicked, pushed, shoved around, or locked indoors.
- 5) I saw some students told lies or spread false rumor about other student(s) and tried to

- make other people dislike him/her/them.
- 6) I saw other student(s) who had money or other things taken away from him/her/them or damaged.
 - 7) I saw other student(s) who were threatened or were forced to do things he/she/they did not want to do.
 - 8) I saw other student(s) who were bullied face-to-face in other ways. (Please specify.)
-

The next few questions might be uncomfortable to answer, but your serious and honest responses are important. AGAIN, this survey is anonymous and your answers will be combined into general statistics with others' responses. The survey DOES NOT provide any way to match your answers to your name.

10. Please evaluate this statement.

- I bullied other student(s) face-to-face during my school life.
[seven-point Likert-type from “never” to “almost every day”]

11. Please evaluate this statement.

- I repeatedly called another student(s) mean names, made fun of or teased him or her in a hurtful way.
[seven-point Likert-type from “never” to “almost every day”]

If Q11's answer is 2 to 7, then the participants will see the following two questions; if not, they will jump to Q14.

12. To whom did you do that?

- A person I knew him/her, and he/she knew me, too
- A person I knew him/her, but he/she didn't know me
- A stranger

13. Thinking about that experience, please indicate to what extent you agree with the statements below. [seven-point Likert-type from “completely disagree” to “completely agree”]

- 1) I did it because he/she/they annoyed me.
- 2) I reacted angrily when provoked by others.
- 3) It was fun and cool.
- 4) I was in bad mood.
- 5) I did it to help others to defend against attacks.
- 6) Other students praised me when I did that.
- 7) I did it to defend myself.
- 8) I did it because he/she/they bullied me before.
- 9) I did it to demonstrate I was more powerful.
- 10) Lots of other students was watching me; I don't want to lose face.
- 11) No one would know I did it and I wouldn't get caught.
- 12) I honestly don't know why I did that.
- 13) I had my own reason to do that. (Please specify.) _____

14. Please evaluate this statement.

- I kept another student(s) out of things on purpose, excluded him or her from my group of friends, or completely ignored him or her.
[seven-point Likert-type from “never” to “almost every day”]

If Q14’s answer is 2 to 7, then the participants will see the following two questions; if not, they will jump to Q17.

Q15 = Q12

Q16 = Q13

17. Please evaluate this statement.

- I hit, kicked, pushed, and shoved another student(s) around, or locked him or her indoors.
[seven-point Likert-type from “never” to “almost every day”]

If Q17’s answer is 2 to 7, then the participants will see the following two questions; if not, they will jump to Q20.

Q18 = Q12

Q19 = Q13

20. Please evaluate this statement.

- I spread false rumors about another student(s) and tried to make others dislike him or her.
[seven-point Likert-type from “never” to “almost every day”]

If Q20’s answer is 2 to 7, then the participants will see the following two questions; if not, they will jump to Q23.

Q21 = Q12

Q22 = Q13

23. Please evaluate this statement.

- I took money or other things from another student(s) or damaged his or her belongings.
[seven-point Likert-type from “never” to “almost every day”]

If Q23’s answer is 2 to 7, then the participants will see the following two questions; if not, they will jump to Q26.

Q24 = Q12

Q25 = Q13

26. Please evaluate this statement.

- I threatened or forced another student(s) to do things he or she did not want to do.
[seven-point Likert-type from “never” to “almost every day”]

If Q26's answer is 2 to 7, then the participants will see the following two questions; if not, they will jump to Q29.

Q27 = Q12

Q28 = Q13

29. Please evaluate this statement.

- I bullied another student(s) face-to-face in other ways. (Please specify.) _____
[seven-point Likert-type from "never" to "almost every day"]

If Q29's answer is 2 to 7, then the participants will see the following two questions; if not, they will jump to Q32.

Q30 = Q12

Q31 = Q13

Cyberbullying Experience

32. How frequently do you participate in these online activities? Please rate each activity.

[seven-point Likert-type from "rarely" to "frequently"]

- 1) Talk in chatrooms
- 2) Send instant messages
- 3) Play online games
- 4) Online shopping
- 5) Watch Video (e.g. YouTube, Netflix, etc.)
- 6) Interact with friends on social network (e.g. Facebook, Twitter, Instagram, etc.)
- 7) Ask/answer/view questions (e.g., Quora, Ask.fm, etc.)
- 8) Post/discuss/view topics on forum or blog (Tumblr, Reddit, etc.)
- 9) Others (please specify) _____

Think back again to your middle school and high school experiences. Now, we want to ask you about what you remember about cyberbullying specifically.

33. Please rate each statement.

[seven-point Likert-type from "never" to "almost every day"]

- 1) I was cyberbullied (i.e., been bullied on the Internet) in my life.
- 2) I was repeatedly called mean names, made fun of, or teased in a hurtful way on the Internet (such as in an email, chat room, instant message, or social network).
- 3) I repeatedly received mean or hurtful messages, pictures, comments on the Internet (such as on social network or someone starts a website to post).
- 4) There were lies or rumors spread about me to put me down or embarrassed me on the Internet.
- 5) There were messages/photos/videos about me on the Internet without my permission (e.g., post my e-mail or message on the Internet which was supposed to be confidential).
- 6) I was threatened on the Internet.

- 7) Other people left me out of an online group on purpose, excluded me from the group of friends (such as playing an online game, joining an online group), or completely ignored me (such as did not talk to me while chatting or instant messaging online).
- 8) I was cyberbullied in other ways. (Please specify.) _____

34. Please rate each statement.

[seven-point Likert-type from “never” to “almost every day”]

- 1) I saw other student(s) who were cyberbullied (i.e., been bullied on Internet).
- 2) I saw other student(s) who were repeatedly called mean names and were made fun of or teased in a hurtful way on the Internet (such as in an email, chat room, instant message, or social network).
- 3) I saw other student(s) who repeatedly received mean or hurtful messages, pictures, comments on the Internet (such as on social network or someone starts a website to post).
- 4) I saw the lies or rumors spread about other student(s) to put his/her/them down or embarrassed him/her/them on the Internet.
- 5) I saw there were messages/photos/videos about other student(s) on the Internet without his/her/their permission (e.g., post his/her/their e-mails or messages on the Internet which were supposed to be confidential).
- 6) I saw other student(s) who were threatened on the Internet.
- 7) I saw some students left other student(s) out of an online group on purpose, excluded him/her/them from the group of friends (such as playing an online game, joining an online group), or completely ignored him/her/them (such as did not talk to him/her/them while chatting or instant messaging online).
- 8) I saw other student(s) who were cyberbullied in other ways. (Please specify.)

The next few questions might be uncomfortable to answer, but your serious and honest responses are important. AGAIN, this survey is anonymous and your answers will be combined into general statistics with others’ responses. The survey DOES NOT provide any way to match your answers to your name.

35. Please evaluate this statement.

- I cyberbullied another student(s) during my school life.
[seven-point Likert-type from “never” to “almost every day”]

36. Please evaluate this statement.

- I called another student(s)’ mean names and made fun of or teased him or her in a hurtful way on the Internet (such as in an email, chat room, instant message, or social network).
[seven-point Likert-type from “never” to “almost every day”]

If Q36’s answer is 2 to 7, then the participants will see the following two questions; if not, they will jump to Q39.

37. To whom did you do that?

- A person I knew him/her, and he/she knew me, too
- A person I knew him/her, but he/she didn't know me
- A stranger

38. Thinking about that experience, please indicate to what extent you agree with the statements below. [seven-point Likert-type from “completely disagree” to “completely agree”]

- 1) I did it because he/she/they annoyed me.
- 2) I reacted angrily when provoked by others.
- 3) It was fun and cool.
- 4) I was in bad mood.
- 5) I did it to help others to defend against attacks.
- 6) Other students praised me when I did that.
- 7) I did it to defend myself.
- 8) I did it because he/she/they bullied me before.
- 9) I did it to demonstrate I was more powerful.
- 10) Lots of other students was watching me; I don't want to lose face.
- 11) No one would know I did it and I wouldn't get caught.
- 12) I honestly don't know why I did that.
- 13) I had my own reason to do that. (Please specify.) _____

39. Please evaluate this statement.

- I sent/posted/forwarded mean or hurtful messages, pictures, comments to another student(s) on the Internet (Such as on social network or start a website to post).
[seven-point Likert-type from “never” to “almost every day”]

If Q39's answer is 2 to 7, then the participants will see the following two questions; if not, they will jump to Q42.

Q40 = Q37

Q41 = Q38

42. Please evaluate this statement.

- I spread/forwarded lies or rumors about another student(s) to put him/her down or embarrassed him/her on the Internet.
[seven-point Likert-type from “never” to “almost every day”]

If Q42's answer is 2 to 7, then the participants will see the following two questions; if not, they will jump to Q45.

Q43 = Q37

Q44 = Q38

45. Please evaluate this statement.

- I posted messages/photos/videos about another student(s) on Internet without his/her permission (e.g., post someone's e-mail on the Internet which was supposed to be confidential).
[seven-point Likert-type from “never” to “almost every day”]

If Q45's answer is 2 to 7, then the participants will see the following two questions; if not, they will jump to Q48.

Q46 = Q37

Q47 = Q38

48. Please evaluate this statement.

- I threatened another student(s) on the Internet.
[seven-point Likert-type from "never" to "almost every day"]

If Q48's answer is 2 to 7, then the participants will see the following two questions; if not, they will jump to Q51.

Q49 = Q37

Q50 = Q38

51. Please evaluate this statement.

- I left another student(s) out of an online group on purpose, excluded him/her from my group of friends (such as playing an online game, joining an online group), or completely ignored him/her (such as ignore them or did not talk to them while chatting or instant messaging online).
[seven-point Likert-type from "never" to "almost every day"]

If Q51's answer is 2 to 7, then the participants will see the following two questions; if not, they will jump to Q54.

Q52 = Q37

Q53 = Q38

54. Please evaluate this statement.

- I cyberbullied another student(s) in another way. (Please specify) _____
[seven-point Likert-type from "never" to "almost every day"]

If Q54's answer is 2 to 7, then the participants will see the following two questions; if not, they will jump to the end of the survey.

Q55 = Q37

Q56 = Q38

APPENDIX B
IRB APPROVAL

IOWA STATE UNIVERSITY
OF SCIENCE AND TECHNOLOGY

Institutional Review Board
Office for Responsible Research
Vice President for Research
1138 Pearson Hall
Ames, Iowa 50011-2207
515 294-4566
FAX 515 294-4267

Date: 3/17/2016
To: Sisi Hu
004 Hamilton Hall
CC: Dr. Andrew D. Pritchard
213 Hamilton Hall
From: Office for Responsible Research
Title: Cyberbullying Research
IRB ID: 16-091
Study Review Date: 3/17/2016

The project referenced above has been declared exempt from the requirements of the human subject protections regulations as described in 45 CFR 46.101(b) because it meets the following federal requirements for exemption:

- (2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey or interview procedures with adults or observation of public behavior where
 - Information obtained is recorded in such a manner that human subjects cannot be identified directly or through identifiers linked to the subjects; or
 - Any disclosure of the human subjects' responses outside the research could not reasonably place the subject at risk of criminal or civil liability or be damaging to their financial standing, employability, or reputation.

The determination of exemption means that:

- **You do not need to submit an application for annual continuing review.**
- **You must carry out the research as described in the IRB application.** Review by IRB staff is required prior to implementing modifications that may change the exempt status of the research. In general, review is required for any modifications to the research procedures (e.g., method of data collection, nature or scope of information to be collected, changes in confidentiality measures, etc.), modifications that result in the inclusion of participants from vulnerable populations, and/or any change that may increase the risk or discomfort to participants. Changes to key personnel must also be approved. The purpose of review is to determine if the project still meets the federal criteria for exemption.

Non-exempt research is subject to many regulatory requirements that must be addressed prior to implementation of the study. Conducting non-exempt research without IRB review and approval may constitute non-compliance with federal regulations and/or academic misconduct according to ISU policy.

Detailed information about requirements for submission of modifications can be found on the Exempt Study Modification Form. A Personnel Change Form may be submitted when the only modification involves changes in study staff. If it is determined that exemption is no longer warranted, then an Application for Approval of Research Involving Humans Form will need to be submitted and approved before proceeding with data collection.

Please note that you must submit all research involving human participants for review. **Only the IRB or designees may make the determination of exemption**, even if you conduct a study in the future that is exactly like this study.

Please be aware that **approval from other entities may also be needed**. For example, access to data from private records (e.g. student, medical, or employment records, etc.) that are protected by FERPA, HIPAA, or other confidentiality policies requires permission from the holders of those records. Similarly, for research conducted in institutions other than ISU (e.g., schools, other colleges or universities, medical facilities, companies, etc.), investigators must obtain permission from the institution(s) as required by their policies. **An IRB determination of exemption in no way implies or guarantees that permission from these other entities will be granted.**

Please don't hesitate to contact us if you have questions or concerns at 515-294-4566 or IRB@iastate.edu.