Cyberbullying among high school students in Japan: Development and validation of the Online Disinhibition Scale

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ABSTRACT

Recent research has revealed some factors that contribute to cyberbullying, but the role of online disinhibition remains an area for further clarification. This study examined online disinhibition and cyberbullying behavior among Japanese adolescents. A sample of 887 high school students (mean age 16.31) were administered a survey about their cyberbullying experience. The questionnaire included the Online Disinhibition Scale (ODS), a new 11 item instrument developed to assess online disinhibition levels. In order to validate ODS, exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) were conducted. EFA yielded two factors subsequently named "benign disinhibition" and "toxic disinhibition". Results from CFA supported the two factor solution as an acceptable model fit. Logistic regression analyses showed that online disinhibition was significantly associated with cyberbullying.

1. Introduction

Cyberbullying is increasingly identified with problematic social and psychological outcomes for children and adults alike. It is defined as intentional and repetitive harmful behavior through the use of information and communication technologies (Hinduja & Patchin, 2009; Smith et al., 2008). In recent years some researchers have questioned the aspect of repetitiveness in cyberbullying due to the structure of the Internet that enables instant dissemination of data and infinitely large audiences once the information is online (Dooley, Pyżalski, & Cross, 2009; Law, Shapka, Hymel, Olson, & Waterhouse, 2012; Vandebosch & Van Cleemput, 2008).

Research shows that up to 70% of children have experienced cyberbullying during their lifetimes (Mora-Merchan, Del Rey, & Jager, 2010, p. 274). Youth who reported being cyberbullied have been shown to suffer from depression (Baker & Tanrıkulu, 2010; Wang, Nansel, & Iannotti, 2011), academic problems (Beran & Li, 2007), decreased self-esteem (Tynes, Rose, & Williams, 2010), and suicidal thoughts (Hinduja & Patchin, 2010). These negative effects are congruent with findings from decades of research of traditional bullying among adolescents, which has been associated with depression and suicidal ideation (Klomek et al., 2008), poorer grades at school (Juvonen, Wang, & Espinoza, 2011), disciplinary problems and truancy (Gastic, 2008) among others. Bullied youth are also more likely to experience post-traumatic stress disorder

(Tehrani, 2004) and commit crime later in life (Olweus, 2011). Compared to traditional bullying, cyberbullying differs in three ways. First, cyberspace enables anonymity for the aggressors. Second, cyberspace is like a stage visible to the whole world. Anybody can become a spectator, thus the audience is infinite. Third, the 24/7 ubiquity of the Internet makes it hard to avoid cyberbullying (Hinduja & Patchin, 2009, pp. 20–25).

1.1. Explaining cyberbullying

Some studies have found simple motives for cyberbullying. Hinduja and Patchin (2009) report that the most common reason for cyberbullying is "to get revenge" (p. 72), while other studies using self-reports identify perpetrators just having fun as the most prevalent reason (Mishna, Cook, Gadalla, Daciuk, & Solomon, 2010; Raskauskas & Stoltz, 2007). Other researchers have used the theory of planned behavior (Li, 2005) and the routine activities theory (Navarro & Jasinski, 2012) as frameworks to better understand the phenomenon. Ang and colleagues found that narcissistic exploitativeness and normative beliefs about aggression are significantly associated with cyberbullying (Ang, Tan, & Talib Mansor, 2011). Others link moral disengagement to cyberbullying (Pornari & Wood, 2010; Renati, Berrone, & Zanetti, 2012) although the findings are mixed, and some studies did not find a significant correlation (Bauman & Pero, 2011; Perren & Gutzwiller-Helfenfinger, 2012). All of the aforementioned studies have focused on the individual excluding the direct influence of technology which could act as a mediating factor in cyberbullying. One the best

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known and researched aspects of technology – anonymity – has been linked to greater disinhibition in the form of self-disclosure (Joinson, 2001), as well as, aggressive posts in online forums (Moore, Nakano, Enomoto, & Suda, 2012) and deviant behavior online (Suler & Phillips, 1998). Combing all the aspects of technology, one possible way that it affects cyberbullying is through online disinhibition, but very few studies have tried to look at separate aspects of online disinhibition. Furthermore, to date no instrument or scale exists that could be utilized to measure online disinhibition. The purpose of this study is to address this gap of knowledge with a specific focus on cyberbullying.

1.2. Online disinhibition

Joinson first described "disinhibition" as lack of inhibition or a type of behavior that is not constrained or restrained, implying a reduction in concerns for self-representation and the judgment of others (Joinson, 1998). Suler (2004) distinguished two types of disinhibition: one that promotes openness, kindness and generosity, which he called benign disinhibition, and a second one that involves rude language, hatred and threats, which he referred to as toxic disinhibition. He did, however, acknowledge the ambiguity between the two factors as an overlap in some cases is very likely. An example of benign disinhibition could be anyone for whom real life conversation can be straining or overpowering, but who feels comfortable sharing his or her thoughts and emotions in the online world. On the other hand, toxic disinhibition could influence someone to insult or ridicule others over the Internet, because of the perceived lack of repercussions and/or anonymity. It has been demonstrated that people tend to be more frank or blunt when communicating through electronic mediums compared to face-to-face interactions that involve observing facial and body movements, listening to voices and modulating responses accordingly (Aoyama, Barnard-Brak, & Talbert, 2011). Suler (2004) explored six factors that interact to promote online disinhibition: dissociative anonymity, invisibility, asynchronicity, solipsistic introjection, dissociative imagination, and minimization of authority. Dissociative anonymity enables a person to hide or change their true identity and separate their actions online from the offline world. Invisibility is described as being unable to see the other person which, as Suler argues, can give courage to do things online that otherwise would not be considered. Asynchronicity is the distorted time flow in online communication that enables delayed response, not needing to cope with other's immediate reaction and thus arguably disinhibiting one's behavior. Solipsistic introjection is the voice or an image of the other person in one's head during online communication. Suler (2004) argues that "online text communication can evolve into an introjected psychological tapestry in which a person's mind weaves these fantasy role plays, usually unconsciously and with considerable disinhibition" (p. 323). Dissociative imagination is separating online and offline worlds, thinking of the former as an imaginary or make-belief world that has no connection to reality. Thus norms and rules from the real world are not applied to online communication leading to disinhibited behavior. Minimization of authority describes the lack or diminished influence of real life cues like one's dress and body language. Being antihierarchical, the Internet enables more equal opportunities for self-expression (Suler, 2004).

Existing research has generally argued that online disinhibition is closely related to cyberbullying and could induce deviant behavior online (Brown, Jackson, & Cassidy, 2006; Hinduja & Patchin, 2009, pp. 21–22; Kowalski, Limber, & Agatston, 2008, pp. 64–65). The most commonly argued aspects of online disinhibition related to cyberbullying are anonymity (Vandebosch & Van Cleemput, 2008), lack of immediate consequences (Kowalski et al., 2008, p. 65), asynchronicity (Hinduja & Patchin, 2009, p. 22), and absence

of rules or authority (Li & Fung, 2012, p. 110). In particular, anonymity related to Internet has been associated with disinhibited behavior online (Kiesler, Siegel, & McGuire, 1984; Sproull & Kiesler, 1986; Suler & Phillips, 1998). Suler's (2004) proposed theory allows a more comprehensive and structured analysis of cyberbullying, combining all the aforementioned aspects of online disinhibition into one theoretical framework.

To date very few studies have tried to explore the link between online disinhibition and cyberbullying. Exceptions include Görzig and Ólafsson (2013), who examined two dimensions of online disinhibition—disinhibited self-representation online and lack of supervision. The study consisted of approximately 1000 (total sample 25,142) interviews with children aged 9–16 in 25 European countries. Disinhibited self-representation was measured using a three items ranging from "1 = Not true" to "3 = Very true" ("I find it easier to be myself on the internet than when I am with people face-to-face"; "I talk about different things on the internet than I do when speaking to people face-to-face"; "On the internet I talk about private things which I do not share with people face-to-face") that assessed online versus face-to-face behavior. Lack of supervision was a dichotomous variable measuring whether children used a computer or phone from a private room in the house. The study found disinhibited self-representation online (three item scale) to be significantly related to increased cyberbullying, while lack of supervision was not statistically significant (Görzig & Ólafsson, 2013).

Varjas, Talley, Meyers, Parris, & Cutts (2010) examined internal and external motivations of cyberbullying among high school students aged 15–19 in a qualitative exploratory study (20 participants) using Grounded Theory. The study combined anonymity (not knowing the identity of the perpetrator or victim) with disinhibition effect (being able to say things you may not say face-to-face) as one factor of the internal motivations for cyberbullying. The factor was confirmed as a significant predictor for cyberbullying, albeit one of the less frequently mentioned (Varjas et al., 2010).

1.3. Purpose of the study

The aim of this study was to fill this existing knowledge gap by examining the link between online disinhibition and cyberbullying.

1. Based on arguments and findings from previous studies, it was hypothesized that online disinhibition will be a significant predictor of cyberbullying (Görzig & Ólafsson, 2013; Varjas et al., 2010).
2. It was hypothesized that cyberbullies will score higher on the Online Disinhibition Scale (ODS) than their non-involved peers.
3. Given the exploratory nature of this study, there was no hypothesis regarding the significance or non-significance of individual items from the ODS predicting cyberbullying.
4. Suler (2004) argued for the separation of benign and toxic disinhibition while acknowledging the ambiguous line between the two. To test this assumption, all the items from the ODS were examined via exploratory factor analysis and confirmatory factor analysis.
5. It was hypothesized that the toxic disinhibition subscale will be a significant predictor of cyberbullying.

2. Methods

2.1. Participants

A total of 941 questionnaires were distributed in six schools in Osaka, Japan. Fifty-four responses were excluded from the analysis due to being incomplete (94.3% completion rate). Participants were