Can emotion regulation serve as a tool in combating cyberbullying?

A.H. den Hamer *, E.A. Konijn

Department of Communication Science, VU University Amsterdam, The Netherlands

ABSTRACT

Victims of bullying tend to become cyberbullies themselves. The Cyclic Process Model describes the processes underlying the relationship between victimization and cyberbullying behavior. The current study examined whether all bullied adolescents experience these processes or that some bullied adolescents are more susceptible for these processes than others. We specifically investigated whether the way an adolescent deals with his/her anger affects the processes of the Cyclic Process Model. It was hypothesized that negatively regulating feelings of victimization-based anger would increase cyberbullying behavior, whereas positive emotion regulation would decrease this behavior. These hypotheses were tested using longitudinal data ($N = 1005$; three waves). Using positive emotion regulation strategies to cope with anger did not result in a reduction in cyberbullying behavior. However, negatively coping with anger did result in higher levels of cyberbullying behavior. More specifically: adolescents were more inclined to perform cyberbullying behavior when they blamed others (or themselves) or constantly thought about the negative experience. This research highlights the importance of training adolescents how to constructively cope with their anger.

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A large body of research evidences the worrisome fact that adolescents who have been bullied (online or offline) tend to become cyberbullies themselves (Den Hamer, Konijn, & Keijer, 2014; Slonje, Smith, & Frisén, 2013; Wright & Li, 2013). One way to explain this relationship is that a victimized adolescent gets angry and frustrated and starts to cyberbully others, assumingly in search for retaliation or a sense of power (cyberbullying as retaliation and power instrument: König, Gollwitzer, & Steffgen, 2010; Patchin & Hinduja, 2010). Indeed, research shows that anger mediates the relation between being victimized and performing acts of cyberbullying (Ak, Özdemir, & Kuzucu, 2015; Den Hamer et al., 2014; Wright & Li, 2013). Moreover, anger is one of the main predictors of cyberbullying behavior (Gradinger, Strohmeier, Schiller, Stefanek, & Spiel, 2012; Lonigro et al., 2014; Patchin & Hinduja, 2010). In addition, research shows that adolescents who feel angry or frustrated experience an increased attraction towards media with antisocial and risk behavior content (Olson, Kutner, & Warner, 2008; Plaisier & Konijn, 2013). This reinforces the effect of anger on cyberbullying behavior, because exposure to antisocial media content stimulates cyberbullying behavior (Calvete, Orue, Estévez, Villardón, & Padilla, 2010; Den Hamer et al., 2014; Dittrick, Beran, Mishna, Hetherington, & Shariff, 2013; Lam, Cheng, & Liu, 2013). In previous studies, we integrated these lines of thought in the Cyclic Process Model, in which a victimized adolescent gets angry, turns to media with antisocial and risk behavior content, which subsequently reinforces performing acts of cyberbullying behavior. Since cyberbullies often become victims again, these adolescents get wind up in a cyclic loop of being victimized, becoming a cyberbully and being bullied again. Empirical support for the Cyclic Process Model was found in both cross-sectional and longitudinal studies (Den Hamer et al., 2014; Den Hamer & Konijn, 2016).

Since anger plays such an important role in the relation between victimization and cyberbullying behavior – either or not reinforced by exposure to media with antisocial and risk behavior content – we argued that adolescents may differ in how they cope with anger and how this affects their cyberbullying behavior. In the current study, we investigate whether adolescents who negatively regulate their anger are more at risk to become cyberbullies after being victimized than adolescents who positively regulate their anger. We expected that the effect of anger on cyberbullying behavior will be stronger for adolescents who apply negative emotion regulation strategies (H1), while applying positive strategies will reduce the effect of anger on cyberbullying behavior (H2). These hypotheses are tested using longitudinal data. In the following, we elaborate on

* Corresponding author: Department of Communication Science, VU University Amsterdam, De Boelelaan 1081, 1081 HV Amsterdam, The Netherlands.
E-mail addresses: a.h.den.hamer@vu.nl (A.H. den Hamer), e.a.konijn@vu.nl (E.A. Konijn).

the hypotheses and present the used methodology and results of the study.

1. The Cyclic Process Model and emotion regulation

The main goal of our research is to understand why adolescents perform cyberbullying behavior and how we can prevent this behavior. The Cyclic Process Model explains how bullied adolescents could become cyberbullies. According to the Cyclic Process Model, a victimized adolescent experiences heightened levels of anger, turns to media with antisocial and risk behavior content (possibly to vent this anger), and stimulated by his or her anger and media exposure, is inclined to perform cyberbullying behavior (for a detailed explanation of the Cyclic Process Model, see Den Hamer et al., 2014; Den Hamer & Konijn, 2016). The current study investigates whether we can differentiate among adolescents in being more or less susceptible. In particular, we investigated the role of emotion regulation strategies. Emotion regulation strategies aim to alter unpleasant emotions after a negative experience (such as being bullied). Or, as Garnefski and Kraaij put it, emotion regulation strategies are "conscious, mental strategies individuals use to handle the intake of emotionally arousing information" (Garnefski & Kraaij, 2014, p. 1154). Negative emotion regulation strategies are blaming others or oneself, constantly reminiscing the stressful event (*rumination*), or thinking about how terrible the event was (*catastrophizing*). Positive emotion regulation strategies are accepting the situation, putting things into perspective, refocusing on positive things, trying to learn from the situation (*positive reappraisal*), and refocusing on what to do next. How adolescents regulate their emotions after experiencing a stressful event affects their well-being, somatic complaints (such as headaches), stress level, and depression and anxiety level (Feinstein, Bhatia, & Davila, 2014; Garnefski & Kraaij, 2014; Machmutow, Perren, Sticca, & Alsaker, 2012; Martin & Dahlen, 2005).

Research showed that both bullies and victims of bullying often use ineffective coping or emotion regulation strategies (Rieffe, Camodeca, Pouw, Lange, & Stockmann, 2012; Spence, De Young, Toon, & Bond, 2009). Children who experience problems in regulating their anger even show increased levels of victimization over time (Spence et al., 2009). While not much is known yet about the effect of maladaptive emotion regulation strategies on performing acts of cyberbullying behavior, one study showed that adolescents who find themselves less able to use and regulate emotions are more at risk to become cyberbullies (Baroncelli & Ciucci, 2014). Furthermore, research focusing on traditional bullying showed that one of the main predictors of both being a traditional bully and a victim of bullying is the inability to deal with feelings of anger (Candelaria, Fedewa, & Ahn, 2012; Lonigro et al., 2014; Lovegrove, Henry, & Slater, 2012). Since anger is an important predictor of cyberbullying behavior (Den Hamer et al., 2014; Gradinger et al., 2012; Lonigro et al., 2014; Patchin & Hinduja, 2010), it is therefore pivotal to know whether the way adolescents regulate their anger affects their cyberbullying behavior. In this respect, Lonigro et al. (2014) suggest that anger-management programs could be an effective manner to reduce prevalence rates of both traditional bullying and cyberbullying behavior.

2. Hypotheses

Following the above mentioned line of reasoning, we expected that applying negative (maladaptive) emotion regulation strategies will enhance the effect of anger on cyberbullying behavior, while using positive (adaptive) emotion regulation strategies will reduce this effect. Therefore, our hypotheses read as follows:

H1. The use of negative emotion regulation strategies increases the effect of anger on cyberbullying behavior.

H2. The use of positive emotion regulation strategies decreases the effect of anger on cyberbullying behavior.

3. Method

3.1. Participants and procedure

A total of 1005 adolescents participated in the study, located at one school (with two subdivisions), and aged between 11 and 17 ($M_{age} = 13.43$; $SD_{age} = 1.06$). The three waves were spread out during one school year, with about two to three months in between waves ($M\text{-}age_{wave1} = 13.43$, $SD_{age\text{-}1} = 1.06$, 51% girls; $M\text{-}age_{wave2} = 13.62$, $SD_{age\text{-}2} = 1.07$, 51% girls; $M\text{-}age_{wave3} = 13.89$, $SD_{age\text{-}3} = 1.09$, 52% girls). Missings were handled according to Hotdeck Imputation (Myers, 2011), and data were imputed with the decks of sex, age, and grade. Not all adolescents participated on each wave, because of other school activities, sickness, and external internships ($n_{wave1} = 792$; $n_{wave2} = 740$; $n_{wave3} = 762$; average response rate of 76.13%).

Participants attended first (37.5%, aged around 12), second (30%, aged around 13), or third (32.5%, aged around 14) grade. The majority of the participants were White Caucasian (60.2%), but also other ethnicities were represented in the sample; Turkish (20.3%), Surinam (4.9%), Moroccan (1.9%), and other backgrounds (12.7%). All procedures performed were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. Both parents and adolescents were informed about our studies, several weeks in advance, and asked for consent in accordance with institutional ethical guidelines. Parents could indicate if they did not want their child to participate and the adolescents could refuse to participate. We received 100% passive consent from the parents and none of the adolescents refused to participate. Participants completed the paper-pencil questionnaire during one class hour, with tables in exam position. Participants could ask for support at any time.[1]

3.2. Measures

For victimization, anger, cyberbullying behavior, and media exposure, Likert-type items with five-point rating scales were used (1 = never, 2 = incidentally, 3 = several times, 4 = often, and 5 = very often). The rating scales of the emotion regulation strategies also ranged from 1 (totally disagree) to 5 (totally agree).

3.2.1. Victimization

The victimization measure consisted of 12 items; three items reflecting offline victimization and a 9-item version of the victimization factor of the Cyberbullying Questionnaire (Calvete et al., 2010; adjusted to modern smartphone technology in Den Hamer et al., 2014). Sample items are "How often are you being hit, kicked, pushed, or locked-up?" and "How often has someone wrote embarrassing jokes, rumors, gossip, or comments about you on the Internet?". After inspection of the inter-item correlations and reliability checks, one of the items was discarded, because only 1% of the respondents indicated to have ever experienced this (i.e., "How often has someone made a video or a cell phone picture of you while you performed some kind of sexual behavior?"). The resulting 11-items showed to have good internal consistency (Cronbachs α wave 1 = 0.82, $M = 1.15$, $SD = 0.28$; Cronbachs α wave 2 = 0.81, $M = 1.15$, $SD = 0.27$; Cronbachs α wave 3 = 0.90, $M = 1.21$, $SD = 0.50$). Items were summed and averaged to create mean index scores for victimization.

3.2.2. Anger

Anger was measured by the 10-item anger and frustration scale of Patchin and Hinduja (2010). A sample item is "How often do you stay

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[1] We collected a multi-purpose large longitudinal dataset to be used for several research goals because it is difficult and costly to collect longitudinal data with adolescents. The dataset has also been used for two former studies with different aims (Den Hamer & Konijn, 2015).