

Cyberbystanders, Affective Empathy and Social Norms

Magdalena Kozubal, Anna Szuster, Julia Barlińska
The Faculty of Psychology, University of Warsaw, Poland

The main aim of the study was to examine the influence of affective empathy and social norms on preventing behavior of cyberbystanders reinforcing cyberbullying. 219 students took part in an experiment conducted in junior high and high schools from three Polish school districts. The goal of the experiment was to check whether the students would forward or delete a humiliating picture. The results indicate a strong impact of previous experiences as a cyberperpetrator on cyberbystanders' reinforcing behavior and a relevant effect of affective empathy activation, which decreased the frequency of cyberbullying enhancing behavior. No significant effect of gender or norm activation was found. Bystanders' negative cyberbullying behavior was effectively reduced through norm priming only in the case of those individuals who were able to appropriately verbalize the contents of violated norms. It indicates that the regulatory role of social norms is subject to cognitive understanding of their contents.

Key words: cyberbullying, cyberbystanders, empathy, affective empathy, social norms

Introduction

In today's world, dominated by technology, the advantages of social media are indisputable. However, the same media are also responsible for generating negative social behaviors like cyberbullying, which violate universally shared norms and cause harm to others (Sproull, Conley, & Moon, 2005).

Cyberbullying is defined as a kind of behavior exhibited by individuals or groups through

electronic or digital media, which is marked by repeatedly communicated, hostile or aggressive messages intended to inflict harm or discomfort on others (Tokunaga, 2010, p. 278). It is a phenomenon of peer-to-peer electronic bullying, which involves the presence of a victim, a bully and bystanders (Barlińska, Szuster, & Winiewski, 2013, 2015; Smith, 2011). Bystanders' reaction to bullying acts may be that of supporting the victim, acting as outsiders or assisting and reinforcing the bullying act (Salmivalli, 2010).

The data concerning bystanders suggest that although young people frequently witness cyberbullying, only a limited number of them actually resolve to intervene (Gini, Albiero, Benelli, & Altoe, 2008; Barlińska et al., 2013, 2015). According to the previous research, such factors as empathy, prosocial norms, self-efficacy, high extraversion, severity of a bullying incident and a close relationship with the victim are conducive to the bystander's intervention (Freis & Gurung, 2012; Thornberg et al., 2012; Macháčková et al., 2013; Barlińska et al.,

Acknowledgement

The project is co-financed by the National Research and Development Centre – "Social Innovations" program.

Correspondence concerning this article should be addressed to Magdalena Kozubal, Faculty of Psychology, University of Warsaw, Stawki 5/7, 00-183 Warsaw, Poland.

E-mail: magdalena.kozubal@psych.uw.edu.pl

Received December 2, 2018

2013). In our research we focused on two factors that appear most significant for impacting bystander's online behavior: affective empathy and social norms.

Empathy Activation as a Solution to the Problem of Cyberbullying

A long history of philosophical reflection and almost a hundred years of psychological studies on empathy have established its status as a unique phenomenon in social relations (cf. Hume, 1739/1968; Smith, 1759/1976; Spencer, 1870; Titchener, 1909; Eisenberg & Strayer, 1987; Davis, 1996; Hoffman, 2000; Batson, 2010; Cuff et al., 2016). A majority of authors pointed out that feelings experienced by the subject witnessing states of others are the essence of empathy. Nowadays, in part due to the discoveries of neuroscience (Preston & de Wall, 2002; de Vignemont & Singer, 2006; Decety, 2007), empathy typically refers to two separate categories of the phenomena, with distinction being made between its affective and cognitive variant, i.e. between empathizing based on feeling vs. understanding other people's states. Cognitive empathy is the ability to understand another person's feelings related closely to the theory of mind (Blair, 2005). Affective empathy is concerned with the experience of emotion, elicited by an emotional stimulus. The two types of empathy have basic common attributes: 1) focus on others, 2) a shortened psychological distance, and 3) feeling of closeness.

Empathy plays a fundamental social role as it allows individuals to share experiences, needs and common goals. Its most frequently mentioned aspect is social significance and the benefits associated with morality, altruism, inhibition of aggression, prosocial and helping behavior (Batson & Shaw, 1991; Hoffman, 2006).

The exploration of cyberbullying among adolescents focuses on the developmental aspects

of empathy and its basic affective mechanisms as they are believed to be innate. Affective empathy is the process of analogous emotional reacting to the incoming stimulus (Eisenberg, 2000). A necessary condition for affective empathy to arise is the presence of another person. A direct contact with such universal human attributes as mimical expressions and eye contact (both optimal and suboptimal), posture or physical distance (Agryle, 1994) activates affective empathy mechanisms. As these elements of contact are substantially less accessible in online conditions (Kiesler, Siegel, & McGuire, 1984), natural mechanisms controlling aggression tend to significantly decrease in cyberspace (Baron-Cohen, 2011). Therefore, the search for effective mechanisms activating empathy and preventing aggressive online behaviors becomes a priority.

Triggering empathy results in fewer aggressive responses to provocation (Richardson, Green, & Lago, 1998). It evokes a sense of guilt, which, in turn, can reduce antisocial behavior (Hoffman, 2001). Research findings clearly point to a variety of connections between cyberbullying and empathy. Affective empathy was found to be lower in case of adolescents who formerly acted as cyberperpetrators than in case of those who did not engage in bullying acts (Renati, Berrone, & Zanetti, 2012; Berne et al., 2013). Also, the degree of empathy was found to be lower in case of cybervictims, while individuals with higher dispositional empathy, when confronted with cyberbullying acts, are more likely to intervene in a prosocial manner (Freis & Gurung, 2012; Macháčková et al., 2013). Both the affective and the cognitive aspect of empathy reduce cyberaggression (Barlińska et al., 2013, 2015). Nevertheless, more evidence for a limiting influence of empathy on bullying and cyberbullying behavior was gathered in the case of affective empathy (Jolliffe & Farrington, 2004; Renati, Berrone, & Zanetti, 2012). Empa-

thy has been successfully introduced as a part of anti-bullying intervention (Twemlow, Fonagy, Sacco, Gies, & Hess, 2001) and prevention programs at schools (Palladino, Nocentini, & Menesini, 2012; Wölfer et al., 2014; Williford et al., 2013).

An empathic response may prompt a bystander to react in a supportive, non-aggressive manner (Macháčková et al., 2013). Another study confirmed that adolescents in conditions of activated empathy were less likely to forward a cyberbullying message as a bullying reinforcing response (Barlińska, Szuster, & Winiewski, 2013, 2015).

Digital tools, with their superficiality and multitasking character (Carr et al., 2003), justify the search for such an empathy activation strategy that will be compatible with cyberspace attributes. The chances of concentrating one's attention on a clear, accessible and universally recognized stimulus are significantly higher in comparison to a more complex content.

The research using Magnetic Resonance Imaging shows that mere exposure to facial expressions of various emotions results in increased arousal in those parts of the observers' brains that are involved in producing such expressions (Carr et al., 2003). According to the perceptual model of empathy (Preston & De Wall, 2002), both observing and imagining what another person feels automatically triggers the neural pathways responsible for representing the affective states of the observed person. With these mental representations it is possible to recognize other people's emotions and express them. The existence of common affective neural pathways may explain how we can experience other people's emotions as our own. Other studies on neural mechanisms underlying empathy showed that exposure to a face expressing sadness or pain is enough to activate mirror neurons, which are also responsible for arousing empa-

thy in more complex situations involving another person's needs (De Vignemont & Singer, 2006).

The findings point out that affective empathy activated by priming of a human face can be an effective strategy in limiting bystander's negative behavior.

Norms Activation as a Solution to the Problem of Cyberbullying

In common understanding (popular also among psychologists) norms are perceived as a set of social "dos" and "don'ts", as shared expectations of how we should act, reinforced by a threat of a group sanction or a promised reward (Schwartz & Howard, 1981). In every society, selfless acts, the ones filled with compassion, are rewarded, whereas violence towards others is punished. In this context social norms are a set of rules that regulate displays of aggression and social life.

Social norms are instilled through the education process whereby expectations towards an individual are verbalized or showed by social objects (parents, teachers, peers) by means of non-verbal factors. During cognitive development the internalization of norms takes place. The process runs from applying norms only in the externally controlled conditions to including them in the Self-structure. Then, when a norm is violated, the internal sanctions, such as shame, sense of guilt, and lower self-esteem, emerge (Schwartz & Howard, 1981).

The standards of online behavior mostly remain non-codified and fairly relativized. Also, parents and teachers are not as present in cyberspace as in reality. Therefore, teenagers in their online peer groups may have difficulties with the creation and compliance with their own norms and standards.

The regulatory role of norms was evidenced by a variety of research. The mere reading of the stories describing violation of social norms

activates those brain areas, which are responsible for recognizing mental states of others and responding to the aversive emotional expressions, particularly anger (Berthoz, Armony, Blair, & Dolan, 2002). Breaking a norm (punishing a partner with an electric shock for making a mistake or lying) was found to increase helpful behavior in the next task performed in a different context (Berkowitz, 1972). Once a rule is breached, a desire to redress appears. In Macaulay's (1970) research, during a fundraising campaign for hungry children, the behavior of passers-by was affected by the demonstrative behavior of the experimenter's assistant, who either refused or offered a donation. In both cases the proportion of people offering donations increased compared to the group, which was not confronted with any behavior priming pattern. According to the researcher's interpretation, observation of other person's behavior not only provides a behavioral pattern, but also plays a role as the already acquired norm activation factor. This kind of activation may also effectively reduce negative behaviors on the Internet.

The regulatory role of social norms in bystander's reactions to cyberbullying has not been that widely studied. However, some pieces of evidence suggest that it also affects the regulation of teen behavior in cyberspace. Positive peer injunctive norms concerning the social life at school are connected with a smaller number of cyberbullying experiences. In contrast, negative peer injunctive norms regarding the approval of risky behaviors result in a greater number of such experiences (Pyżalski, 2013). Research shows that adolescent bystanders overestimate reinforcement of bullying among their peers, which is positively correlated with active assisting in bullying acts (Sandstrom, Makover, & Bartini 2012). A bystander's belief that bullying is wrong is a factor motivating to intervene. However, if a bystander believes that such an inter-

vention is not his/her moral responsibility, this, in turn, can lead to a passive or a negative behavior (Macháčková, 2013; Thornberg et al., 2012).

The results of one of the few longitudinal studies on cyberbullying showed that social norm violating behaviors are conducive to involvement in cyberbullying (Ybarra & Mitchell, 2004; Sticca, Ruggieri, Alsaker, & Perren, 2013, 2015). Thus, the content of one's norms may affect the choice of reactions towards cyberbullying acts, i.e. the decision to remain passive or to reinforce bullying.

The data presented show that cyberbullying reinforcing behaviors may be limited through exposure to norm violating behaviors.

The Role of Cyberperpetration Experience and Gender

The previous data confirmed that exposure to aggression increases the probability of accepting different bullying forms and tolerating violence both in reality and in cyberspace (Ybarra & Mitchell, 2004; Völlink, Bolman, Dehue, & Jacobs, 2013). Being a perpetrator of cyberbullying is an important predictor of cyberbystander's bullying reinforcing behavior (Barlińska et al., 2013, 2015; Macháčková et al., 2013). Therefore, it was expected that in the study discussed above the said dependency would be replicated.

The empirical findings concerning the relationship between gender and cyberbystander's behavior are equivocal. In some studies females were found to be offering greater support and assistance than males when witnessing cyber-aggression, whereas in others no sex differences with regard to bystander's both positive and negative reactions to cyberbullying were reported (Barlińska et al., 2013, 2015; Macháčková et al., 2013). Therefore, in the present study the role of gender was also monitored.

Aim of the Study

In the current study of an experimental character, the focus was on the factors preventing cyberviolence among bystanders. We concentrated on priming empathy and social norms as well as on the influence of cyberbullying perpetrators' gender and experiences.

The effectiveness of empathy activation in preventing cyberbullying reinforcing behavior via watching a testimony of a cyberbullying victim has been proved in our previous studies (Barlińska et al., 2013; Barlińska et al., 2015). In the current study, we focused only on affective empathy priming methods activated through the exposure of a human face. Sufficient data points to the regulatory potential of social norms in bystander's reactions to cyberbullying. We expected that cyberbullying reinforcing behavior may be inhibited through exposure to norm violating behaviors and their verbalization. Cyberperpetration experience and gender are two other factors included in the study, which were proved to modify adolescents' reactions to cyberbullying.

The main hypotheses were as follows:

Priming of both affective empathy and social norms would decrease the frequency of cyberbullying reinforcing behaviors.

The experience of cyberbullying as its perpetrator would increase the frequency of cyberbullying reinforcing behaviors.

Method

Participants

The sample consisted of $N = 219$ pupils from junior high schools and high schools (118 boys and 101 girls), aged 12–18 ($M_{age} = 14.77$, $SD_{age} = 1.43$ years). In terms of activating affective empathy, the number of participants in the group was 63 ($N = 63$), in the conditions of activating

the normative system 59 ($N = 59$) and in a control conditions 97 ($N = 97$).

Instruments

Faces

In order to activate affective empathy, 14 pictures, taken from the Ekman and Friesen's "Pictures of Facial Affect" collection (POFA; 1976), had been uploaded on a special online platform. The pictures presented 6 male and 8 female faces expressing sadness. The adolescents were asked to mark whether they liked a given face or not (a masking task). After choosing an answer another picture appeared on the screen.

The Pictorial Test of Social Incompatibility

In order to activate social norms, the Pictorial Test of Social Incompatibility (PTSI) was used. This questionnaire consisted of 11 black and white schematic pictures. Each of them presented a norm violating behavior. For instance, a young man with a baseball bat demolishing a bus stop. The task was to answer the question: "What's wrong in this picture?" At the beginning there was an exemplary picture with the previously provided answer. The effectiveness of the "norm priming" procedure can be confirmed by the results of the study referred to in the introduction (see Macaulay, 1970; Berkowitz, 1972).

The measure of the correctness of recognizing violated social norms was the average of the answers identifying the content of the norms (for example, "this is stealing," or "you cannot steal"). One point was given for a correct answer and 0 points for a wrong answer. Half a point was in turn given for those answers which identified, for example, legal rules, such as traffic regulations (a driver should not speed), or unwritten safety rules (a woman's handbag should be closed).

The ratio of correctness was determined by the average of the answers, calculated by means of the following formula: $\text{Correctness of Recognizing Social Norms} = (n_1 + n_2 + \dots + n_{11}) / 11$, where n_1, n_2, \dots, n_{11} signify points given for answers to each of the 11 questions asked. The higher the ratio, the more substantial the correctness of recognizing the displayed standards¹.

*Message from a Peer*²

“Message from a friend” simulated a social networking website by means of which the pupils had a short chat with a virtual friend, who at the end encouraged them to send a message insulting a different pupil (a photomontage presenting a dog with a boy’s head). The participants could choose between sending forward the insulting message (cyberbystander’s reinforcing behavior) or deleting it (neutral behavior).

Cyberbullying Questionnaire

A scale of cyberperpetration experience from the Questionnaire of Cyberbullying experience (Barlińska & Wojtasik, 2008) was employed. Responses were given on a 4-point scale (1 = never; 4 = several times). The incidence of cyberperpetrator experience was the averaged score for each question (e.g., “Have you ever blackmailed someone on the Internet?”). It proved to be internally consistent, $\alpha = 0.83$ ($M_{\text{perpetrator}} = 1.03$, $SD = 2.01$). The scores were used in further analyses.

Procedure

This experimental study was conducted by using a web application that simulated a social networking site and a messaging service³. It took place in computer labs, in small groups. The participants were randomly assigned to the experimental or control groups. Anonymity was guaranteed by the use of unique one-time codes which allowed access to an experimental web application. In the first group (empathy activation condition) the participants were shown sad faces on the monitor, whereas in the second group (norm activation condition) the participants were shown schematic drawings illustrating behaviors that break social norms (The Pictorial Test of Social Incompatibility). In the third group – control condition there was no manipulation. Next, all participants took part in an online task called “Message from a peer”.⁴ They were asked to make a choice between sending or deleting offensive material. Finally, students completed a Cyberperpetrator experience questionnaire.

Plan of Analysis

The independent variables were both of a situational (activation of a normative system, activation of empathy) and dispositional (ability to recognize norms correctly) character. The controlled factors were gender and previous cyberperpetration experience. The dependent variable was online behavior (reinforcing vs.

¹ The schematic pictures were evaluated by three psychologists. It was assessed to what extent the material presented by these pictures was identified as the violation of social norms. Those pictures which the psychologists assessed in a fully compatible way were selected and included in the study. The responses of its participants were assessed according to the key prepared by the psychologists.

² Social desirability was controlled; no correlations were found (Barlińska, Szuster, & Winiewski, 2013).

³ The study was approved by the ethics committee of the Faculty of Psychology of Warsaw University

⁴ A detailed description of the method is presented in Barlińska, Szuster, and Winiewski (2013), Cyberbullying among adolescent bystanders: Role of the communication medium, form of violence and empathy, *Journal of Community and Applied Social Psychology*, 23, 37-51. doi: 10.1002/casp.2137

neutral) in the situation of being a bystander of a cyberbullying act.

Plan of Analysis I

Logistic regression analyses were conducted in order to evaluate whether the activation of affective empathy and social norms reduced the likelihood of cyberbystander's reinforcing behavior. Additionally, we tested whether cyberperpetrator experience increased the frequency of choosing the reinforcing versus neutral reaction, and whether gender had any relationship to the violence enhancing actions. The logistic regression model was chosen due to having a dichotomous dependent measure and several continuous and binary predictors. It is reported following Peng, Lee, and Ingersoll's (2002) guidelines.

Plan of Analysis II

The Pictorial Test of Social Incompatibility used for priming of norms measures also the correctness of norm recognition. In the second

analysis this variable was taken into account. As in the first analysis, logistic regression was conducted to evaluate whether the correctness of recognizing violated social norms would decrease the likelihood of cyberbullying reinforcing behavior of a bystander.

Results

A little over 20.5% ($n = 52$) of the sample selected the behavior that reinforced cyberbullying. The logistic regression analysis was conducted, with the selected behavior (0 = neutral, 1 = cyberbullying reinforcing behavior) as the dependent variable. Table 1 presents the figures of the odds ratio coefficients with 95% confidence intervals, Wald statistics with the level of significance for each variable at each stage of the analysis, overall model match statistics, and the selected detailed parameters. The model suggested a good match (Likelihood ratio test = 62.13, $df = 1$, $p < .001$; Omnibus test = 20.72, $df = 4$, $p < .001$) and reasonably good predictive abilities (Cox & Snell $R^2 = 0.09$; Nagelkerke $R^2 = 0.14$).

Table 1 *The results of the logistic regression analysis for the experimental conditions (activation of affective empathy and activation of social norms), experience as a cyberperpetrator, the influence of the gender category and cyberbystander behavior*

Predictor	<i>B</i>	<i>SE β</i>	Wald's χ^2	<i>OR (95% CI)</i>
Experimental conditions			8.94*	
Act. of empathy (Faces)	-1.80	0.63	8.21**	0.16 (0.05-0.57)
Act. of social norms (Pictures)	0.02	0.38	0.01	1.02 (0.48-2.20)
Exp. cyberperpetrator	0.38	0.11	11.75***	1.46 (1.18-1.81)
Gender ^a	-0.33	0.35	0.89	0.77 (0.3-1.3)
Overall model			χ^2	
Likelihood ratio test			62.13***	
Score test			20.72***	
Hosmer & Lameshow test			12.64	

Note. ^a Gender was coded females = 1, males = 2

Cox & Snell $R^2 = .09$; Nagelkerke $R^2 = .14$

*** $p > .001$; ** $p > .01$; * $p > .05$.

On the basis of the obtained relevant odds ratio coefficients, it can be concluded that the probability of cyberbystanders' reinforcing behavior in the activation of affective empathy condition (face images) is considerably lower than in the control condition (the odds ratio coefficient, $OR = 0.16$). Furthermore, the probability of cyberbullying reinforcing behavior of a bystander increases with the intensity of the cyberperpetration experience ($OR = 1.50$). The activation of social norms and the influence of gender did not have significant effects.

The results are consistent with previous studies (Barlińska et al., 2013, 2015). They show a strong impact of experiences as a cyberperpetrator. The experience of being a perpetrator increased the frequency of behavior that reinforced cyberbullying. These students more often sent messages ridiculing their peer. In turn, empathy priming was proved analogically effective in decreasing the frequency of cyberbullying enhancing behavior of a cyberbystander. No effect of norms activation was obtained as well.

Table 2 presents the figures of the odds ratio coefficients with 95% confidence intervals, Wald statistics with the level of significance for each variable at each stage of the analysis, overall model match statistics, and the selected detailed parameters. The model suggested a good match (Likelihood ratio test = 12.96, $df = 1$, $p < .001$; Omnibus test chi-square = 17.40, $df = 1$,

$p < .001$) and good predictive abilities (Cox & Snell $R^2 = 0.26$; Nagelkerke $R^2 = 0.38$).

On the basis of the obtained relevant odds ratio coefficients, it can be concluded that the probability of cyberbystander's reinforcing bullying behavior is considerably lower when the correctness of recognizing social norms is higher (odds ratio coefficient $OR = 0.00$).

Discussion

The study aimed at exploring the regulatory role of factors modifying adolescent cyberbystander pro-bullying behavior. The results clearly confirm the influence of cyberperpetration experience on perpetrators' activities in cyberspace. Bystanders tend to support other, often unknown web users in performing harm inflicting acts. It is coherent with the already obtained findings of the research on bystander's behavior (Barlińska et al., 2013, 2015; Macháčková et al., 2013). Although no significant effect of gender or norm activation was found, further analysis showed that correct social norm recognition diminishes the likelihood of bystander's negative behavior, which stays in line with some previous findings (Thornberg et al., 2012). Affective empathy priming led to the decreased frequency of bystander's negative behavior. The results concerning the modifying role of empathy a rereplicative (Barlińska et al., 2013, 2015;

Table 2 *The results of the logistic regression analysis for the recognition of social norms and cyberbystander behavior*

Predictor	<i>B</i>	<i>SE β</i>	Wald's χ^2	<i>OR (95% CI)</i>
Recognition of social norms	-6.37	1.98	10.34***	0.00- (0.00-0.0873)
Overall model			χ^2	
Likelihood ratio test		12.96***		
Omnibus test		17.40***		
Hosmer & Lameshow test		5.18		

Note. Cox & Snell $R^2 = .26$; Nagelkerke $R^2 = .38$

*** $p > .001$; ** $p > .01$; * $p > .05$.

Macháčková et al., 2013). As opposed to a majority of other studies (in which questionnaire empathy measures were used), in our experimental research the priming material contained a simple stimulus of perceptively expressive character, which induced empathic arousal. It appears that exposing cyberbullying bystanders to a human face expressing sadness can modify their behavior and neutralize actions that reinforce cyberbullying. Proving the effectiveness of this stimulus in cyberspace dominated by indirect contact can yield profound practical implications. The main objective of future research should be to find better solutions for adapting empathy arousing methods to the “language” of the Internet by designing websites and programs devoted to the consequent activation of empathy. The advantage of the employed method was that the stimulus (human face) was in no way connected with the adolescents’ behavior recorded in the study. Therefore, the effectiveness of such an activation strategy appears particularly worth considering. In order to activate affective empathy mechanisms, standardized photos of a human face (from the Ekman’s catalogue), the effectiveness of which was also confirmed by the research with the use of FMR (Carr et al., 2003), were used with a basic emotion, i.e. sadness, exposed. Nevertheless, the question regarding the effectiveness of neutral face exposure arises. Further research is expected to differentiate which factor is the key to the effectiveness of this manipulation: a face itself or the exposure of a basic emotion.

The simple effect of priming through the exposure of a social norm violation proved to be ineffective in decreasing cyberbullying reinforcement. However, further analysis revealed an additional condition: the priming effect of norm exposure had an impact on negative online behavior when the content of norms was correctly recognized. Contrary to the in-

nate and primal character of affective empathy mechanisms, the regulatory role of norms appears as a result of complex cognitive mechanisms that require social learning (Bandura, 1973). As norms are of an abstract nature, their adoption is a long-term, individually motivated process dependent upon cognitive and social development. This is also a challenge for educators and teachers to help children verbalize and adopt social norms by naming them, discussing them, showing their purpose and significance. Outside of the family home, school is the most important socialization environment. One’s ability to identify and verbalize a norm is not only indicative of one’s knowledge of the norm existence. It is a proof that such a norm has been understood and processed. This, in turn, profoundly affects the regulatory character of norms and opens up new possibilities for an individual to view a given phenomenon from various standpoints. The ability to verbalize is a manifestation of reflective processing (Kahnemann, 2011) that increases control upon frequently automatic online reactions (like the clicking of the “forward” button). This process enables the rules observed by an individual in a specific situation to be further generalized and applied to a different social context, also to cyberbullying. In cyberspace, young people make choices without adult supervision, which also applies to cyberbullying and its witnessing. The achieved results indicate that correct norms internalization leads to their implementation in the virtual world as well. This is, however, a long-term process which largely depends upon a socialization process and individual differences (Hoffman, 2000). Thus, it is necessary to focus on social norms in the Internet environment and devise preventive methods based on clearly determined specific cyberbullying situations, such as teaching pupils how to intervene effectively as responsible and active bystanders both online and offline.

The current investigation has its strengths and limitations. The main strength is the general design using an innovative experimental approach. Among the main limitations is the narrowed measurement of the dependent variable, which has been operationalized by only one of various cyberbullying acts and giving the participants a limited range of behavioral options. Following this, a conclusion about the effectiveness of both affective empathy and norm activation is limited only to this specific form of cyberbullying. Another limitation, resulting from the ethical nature of experimental methods, is the fact that the cyberbullying situation was only simulated. Future experimental studies on effectiveness of inductions in diminishing the scale of cyberbullying reinforcement from bystanders should use more complex stimuli, which will raise the studies' ecological validity.

The sample included adolescents aged 12 to 18. Since affective empathy is based mostly on basic neurological mechanisms, it can be significant when it comes to social norms, the internalization of which depends also on the stage of development. In further studies on cyberbullying, the preventing role of normative systems should also be investigated.

Empathy activation and correct norm recognition were found to be the two major factors effectively reducing bystander's reactions reinforcing a potential cyberbullying act. The findings support previous results indicating the importance of sensitizing bystanders to a potential harm caused by cyberbullying and of encouraging bystander's positive behavior through the enhancement of empathy skills and the development of anti-bullying norms (Barlińska et al., 2013; DeSmet et al., 2014; Thornberg et al., 2012).

References

- Ang, R. P., & Goh, D. H. (2010). Cyberbullying among adolescents: The role of affective and cognitive empathy, and gender. *Child Psychiatry and Human Development*, 41(4), 387–397. doi: 10.1007/s10578-010-0176-3
- Argyle, M. (1994). *The psychology of interpersonal behaviour*. Penguin UK.
- Bandura, A. (1973). *Aggression: A Social Learning Analysis*. Prentice-Hall, Englewood Cliffs, N. J.
- Barlińska, J., & Wojtasik, Ł. (2008). Peer violence and electronic media – research and social campaign. In M. Barbovschi & M. Diaconescu (Eds.), *Teenagers' actions and interactions online in Central and Eastern Europe. Potentials and empowerment, risks and victimization* (pp. 281–299). Cluj-Napoca, Romania: Cluj University Press Babes- Bolyai University.
- Barlińska, J., Szuster, A., & Kozubal, M. (2016). In search of a simple method: Is a human face an effective, automatic filter inhibiting cyberbullying? In M. F. Wright (Ed.), *A social-ecological approach to cyberbullying*. Hauppauge: Nova Publishing. ISBN: 978-1-63483-755-2
- Barlińska, J., Szuster, A., & Winiewski, M. (2015). The role of short-and long-term cognitive empathy activation in preventing cyberbystander reinforcing cyberbullying behavior. *Cyberpsychology, Behavior and Social Networking*, 18(4), 241–244. doi: 10.1089/cyber.2014.0412
- Barlińska, J., Szuster, H., & Winiewski, M., (2013). Cyberbullying among adolescent bystanders: Role of the communication medium, form of violence and empathy. *Journal of Community and Applied Social Psychology*, 23, 37–51. doi: 10.1002/casp.2137.
- Baron-Cohen, S. (2011). *The science of evil*. London: Basic Book ISBN-10: 0465031420
- Bastiaensens, S., Vandebosch, H., Poels, K., Van Cleemput, K., DeSmet, A., & De Bourdeaudhuij, I. (2014). Cyberbullying on social network sites. An experimental study into bystanders' behavioral intentions to help the victim or reinforce the bully. *Computers in Human Behavior*, 31, 259–271. doi: 10.1016/j.chb.2013.10.036
- Berkowitz, L. (1972). Social norms feelings, and other factors affecting helping and altruism, In L. Berkowitz (Ed.), *Advances in Experimental Social Psychology*, 6 (pp. 63–108). New York: Academic Press.
- Berne, S., Frisén, A., Schultze-Krumbholz, A., Scheithauer, H., Naruskov, K., Luik, P., Katzer, C., Erentaite, R., & Zukauskienė, R. (2013). Cyberbullying assessment instruments: A systematic review. *Aggression and Violent Behavior*, 18(2), 320–334. doi: 10.1016/j.avb.2012.11.022
- Berthoz, S., Armony, J. L., Blair, R. J. R., & Dolan, R. J. (2002). An fMRI study of intentional and unin-

- tentional (embarrassing) violations of social norms. *Brain*, 125(8), 1696–1708. doi: 10.1093/brain/awf190
- Blair, R. J. R. (2005). Responding to the emotions of others: Dissociating forms of empathy through the study of typical and psychiatric populations. *Consciousness and Cognition*, 14(4), 698–718. doi: 10.1016/j.concog.2005.06.004
- Carr, L., Iacoboni, M., Dubeau, M. C., Mazziotta, J. C., & Lenzi, G. L. (2003). Neural mechanisms of empathy in humans: A relay from neural systems for imitation to limbic areas. *Proceedings of the National Academy of Sciences*, 100(9), 5497–5502. doi: 10.1073/pnas.0935845100
- Chalmers, J. B., & Townsend, R. (1990). The effect of training in social perspective taking on socially maladjusted girls. *Child Development*, 61, 178–190. doi: 10.2307/1131057
- Cuff, B. M., Brown, S. J., Taylor, L., & Howat, D. J. (2016). Empathy: A review of the concept. *Emotion Review*, 8(2), 144–153. doi: 10.1177/1754073914558466
- Davis, M. H. (1996). *Empathy: A social-psychological approach*. Boulder, CO: Westview Press.
- Davis, M. H., Conklin, L., Smith, A., & Luce, C. (1996). Effect of perspective taking on cognition representation of persons: A merging of self and other. *Journal of Personal and Social Psychology*, 70(4), 713–726. doi: 10.1037/0022-3514.70.4.713
- De Vignemont, F., & Singer, T. (2006). The empathic brain: How, when and why? *Trends in Cognitive Sciences*, 10(10), 435–441. doi: 10.1016/j.tics.2006.08.008
- Decety, J. (2007). A social cognitive neuroscience model of human empathy. In E. Harmon-Jones & P. Winkielman (Eds.), *Social neuroscience: Integrating biological and psychological explanations of social behavior* (pp. 246–270), New York: Guilford Press
- Decety, J., & Jackson, P. L., (2004). Functional architecture of human empathy. *Behavioural and Cognitive Neuroscience Reviews*, 3(2), 71–100. doi: 10.1177/1534582304267187
- DeSmet, A., Veldeman, C., Poels, K., Bastiaensens, S., Van Cleemput, K., Vandebosch, H., & De Bourdeaudhuij, I. (2014). Determinants of self-reported bystander behavior in cyberbullying incidents amongst adolescents. *Cyberpsychology, Behavior, and Social Networking*, 17(4), 207–215. doi: 10.1089/cyber.2013.0027
- Eisenberg, N. (2000). Emotion, regulation and moral development. *Annual Review Psychology*, 51, 665–697. doi: 10.1146/annurev.psych.51.1.665
- Eisenberg, N., & Strayer, J. (1987). Critical issues in the study of empathy. In N. Eisenberg & J. Strayer (Eds.), *Cambridge studies in social and emotional development. Empathy and its development* (pp. 3–13). New York, NY, US: Cambridge University Press.
- Freis, S. D., & Gurung, R. A. (2012). A Facebook analysis of helping behavior in online bullying. *Psychology of Popular Media Culture*, 1–9. doi: 10.1037/a0030239
- Gini, G., Albiero, P., Benelli, B., & Altoe, G. (2008). Determinants of adolescents' active defending and passive bystander behavior in bullying. *Journal of Adolescence*, 31(1), 93–105. doi: 10.1016/j.adolescence.2007.05.002
- Hoffman, M. L. (2000). *Empathy and moral development. Implication for caring and justice*. Cambridge: Cambridge University Press. doi: 10.1017/CBO9780511805851
- Hoffman, M. L. (2001). *Empathy and moral development: Implications for caring and justice*. Cambridge University Press.
- Hume, D. (1739/1968). *A treatise of human nature*. In H. A. Selby-Bigge (Ed.). Oxford: Clarendon Press.
- Jolliffe, D., & Farrington, D. P. (2004). Empathy and offending: A systematic review and meta-analysis. *Aggression and Violent Behavior*, 9(5), 441–476. doi:10.1016/j.avb.2003.03.001
- Kahneman, D. (2011). *Thinking, fast and slow*. Macmillan.
- Kiesler, S., Siegel, J., McGuire, T. W. (1984). Social psychological aspects of computer mediated communications. *American Psychology*, 39, 1123–1134. doi: 10.1037/0003-066X.39.10.1123
- Kiesler, S., Siegel, J., & McGuire, T. W. (1984). Social psychological aspects of computer-mediated communication. *American Psychologist*, 39(10), 1123–1134. doi:10.1037/0003-066X.39.10.1123
- Macaulay, J. R. (1970). A'shille for charity. In L. Berkowitz & J. R. Macaulay, *Altruism and helping behavior* (pp.36–48) New York: Academic Press.
- Macháčková, H., Dedková, L., Ševčíková, A., & Černá, A. (2013). Bystanders' support of cyberbullied schoolmates. *Journal of Community & Applied Social Psychology*, 23(1), 25–36. doi: 10.1002/casp.2135
- Menesini, E., Codecasa, E., & Benelli, B. (2003). Enhancing children's responsibility to take action against bullying: Evaluation of a befriending intervention in Italian middle schools. *Aggressive Behavior*, 29, 10–14. doi: 10.1002/ab.80012
- Palladino, B. E., Nocentini, A., & Menesini, E. (2012). Online and offline peer led models against bullying and cyberbullying. *Psichema*, 24(4), 634–639.
- Peng, C. Y. J., Lee, K. L., & Ingersoll, G. M. (2002). An introduction to logistic regression analysis and reporting. *The Journal of Educational Research*, 96(1), 3–14. doi: 10.1080/00220670209598786

- Preston, S. D., & De Waal, F. (2002). Empathy: Its ultimate and proximate bases. *Behavioral & Brain Sciences*, 25, 1–72.
- Pyżalski, J. (2013). Beyond peer cyberbullying – involvement of Polish adolescents in different kinds of electronic aggression, *Studia Edukacyjne*, 28, 147–168. ISBN 978-83-232-2731-1.
- Renati, R., Berrone, C., & Zanetti, M. A. (2012). Morally disengaged and unempathic: Do cyberbullies fit these definitions? An exploratory study. *Cyberpsychology, Behavior, and Social Networking*, 15(8), 391–398. doi: 10.1089/cyber.2012.0046
- Richardson, D. R., Green, L. R., & Lago, T. (1998). The relationship between perspective-taking and nonaggressive responding in the face of an attack. *Journal of Personality*, 66(2), 235–256. doi: 10.1111/1467-6494.00011
- Salmivalli, C. (2010). Bullying and the peer group: A review. *Aggression and Violent Behavior*, 15, 112–120. doi: 10.1016/j.avb.2009.08.007
- Sandstrom, M., Makover, H., & Bartini, M. (2012). Social context of bullying: Do misperceptions of group norms influence children's responses to witnessed episodes? *Social Influence*, 8, 196–215. doi: 10.1080/15534510.2011.651302.
- Schwartz, S. H. (1977). Normative influence on altruism. In L. Berkowitz (Ed.), *Advances in Experimental Social Psychology* (Vol. 10, pp. 221–279). New York: Academic Press. doi: 10.1016/s0065-2601(08)60358-5.
- Schwartz, S. H., & Howard, J. A. (1981). A normative decision-making model of altruism. In J. P. Rushton & R. M. Sorrentino (Eds.), *Altruism and Helping Behavior: Social, Personality, and Developmental Perspectives* (pp. 189–211). Lawrence Erlbaum, Hillsdale.
- Smith, A. (1759/1976). *The theory of moral sentiments*. Oxford: Clarendon Press.
- Smith, P. K. (2011). Bullying in schools: Thirty years of research. In C. P. Monks & I. Coyne (Eds.), *Bullying in different contexts* (pp. 36–60). Cambridge: Cambridge University press. doi: 10.1017/CBO9780511921018.003
- Spencer, H. (1870). 1872. *The principles of psychology*, 2. London: Williams.
- Sproull, L., Conley, C., & Moon, J. M. (2005). The kindness of strangers: Prosocial behavior on the Internet. In Y. Amichai-Hamburger (Ed.), *The Social Net: Human behavior in cyberspace* (pp. 139–161). Oxford Press University. doi: 10.1093/acprof:oso/9780199639540.003.0008
- Sticca, F., Ruggieri, S., Alsaker, F., & Perren, S. (2013). Longitudinal risk factors for cyberbullying in adolescence. *Journal of Community & Applied Social Psychology*, 23(1), 52–67. doi: 10.1002/casp.2136
- Thornberg, R., Tenenbaum, L., Varjas, J., Meyers, K., Jungert, T., & Vanegas, G. (2012). Bystander motivation in bullying incidents: To intervene or not to intervene. *Western Journal of Emergency Medicine*, 13, 247–252. doi: 10.5811/westjem.2012.3.11792
- Titchener, E. B. (1909). *A text-book of psychology, Part 1*. New York, NY, US: MacMillan Co.
- Tokunaga, R. S. (2010). Following you home from school: A critical review and synthesis of research on cyberbullying victimization. *Computers in Human Behavior*, 26, 277–287. doi: 10.1016/j.chb.2009.11.014
- Twemlow, S. W., Fonagy, P., Sacco, F. C., Gies, M. L., & Hess, D. (2001). Improving the social and intellectual climate in elementary schools by addressing bully-victim-bystander power struggles. In J. Cohen (Ed.), *Caring classrooms/intelligent schools: The social emotional education of young children* (pp. 162-182). Teachers' College Press: New York.
- Völlink, T., Bolman, C. A. W., Dehue, F., & Jacobs, N. (2013). Coping with cyberbullying: Differences between victims, bully-victims and children not involved in bullying. *Journal of Community & Applied Social Psychology*, 23, 7–24. doi: 10.1002/casp.2142
- Williford, A., Elledge, L. Ch., Boulton, A. J., DePaolis, K. J., Little, T. D., & Salmivalli, Ch. (2013) Effects of the KiVa Antibullying Program on cyberbullying and cybervictimization frequency among Finnish youth, *Journal of Clinical Child & Adolescent Psychology*, 42(6), 820–833. doi: 10.1080/15374416.2013.787623
- Wölfer, R., Schultze-Krumbholz, A., Zagorscak, P., Jäkel, A., Göbel, K., & Scheithauer, H. (2014). Prevention 2.0: Targeting cyberbullying @ school. *Prevention Science*, 15(6), 879-887.
- Ybarra, M. L., & Mitchell, K. J. (2004). Online aggressors/targets, aggressors, and targets: A comparison of associated Youth characteristics. *Journal of Child Psychology and Psychiatry*, 45(7), 1308–1316. doi: 10.1111/j.1469-7610.2004.00328.x