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BEYOND PEER CYBERBULLYING – INVOLVEMENT OF POLISH ADOLESCENTS IN DIFFERENT KINDS OF ELECTRONIC AGGRESSION

ABSTRACT. Pyżalski Jacek, *Beyond Peer Cyberbullying – Involvement of Polish Adolescents in Different Kinds of Electronic Aggression* [Nie tylko mobbing elektroniczny – zaangażowanie polskich nastolatków w różne rodzaje agresji elektronicznej]. *Studia Edukacyjne* nr 28, 2013, Poznań 2013, pp. 147-167. Adam Mickiewicz University Press. ISBN 978-83-232-2731-1. ISSN 1233-6688

Cyberbullying is often defined as aggression conducted through mobile phones and the Internet. This phenomenon is predominantly understood as a kind of peer aggression, when both the perpetrator(s) and the victim belong to the same group (class or online community). However, the Internet extends and facilitates harassment not only of peers.

The paper focuses on different kinds of electronic aggression identified through qualitative research (interview, e-mail interviews and focus groups with students and teachers). The results have shown that except cyberbullying one can indicate five further types of electronic aggression. They are: aggression against celebrities (e.g. actors, singers, etc.), aggression against the vulnerable (e.g. alcoholics, etc.), aggression against school staff, aggression against groups/ideas (when the victim is not a particular, identifiable person) and free-floating (random) aggression (often when the victim is totally anonymous to the perpetrator). This typology has been positively verified in a survey on a representative sample of Polish adolescents (N = 2143).

The paper presents the typology with the examples from the qualitative stage of research, also discussing potential socialization risks for each kind of electronic aggression. It shows also (on the basis of quantitative research) the prevalence of perpetration and victimization of different kinds of electronic aggression as well as their co-occurrence. It demonstrates the factors that influence such involvement. It must be stated that although peer aggression cyberbullying seems to be predominant, other kinds of electronic aggression have also been frequently conducted by the respondents. For example, a significant percentage of perpetrators attacked through new media the following groups of victims: random Internet users (30.3%), groups of people (19.7%), celebrities (13.9%), and vulnerable victims (13.3%). The conclusions underline the need to extend prevention educational tools to different kinds of electronic aggression, not restricting them to cyberbullying understood as an extension of traditional bullying.

Key words: cyberbullying, electronic aggression, adolescents, ICT, computer-mediated communication

Introduction

Electronic aggression (that may be also called cyber-aggression) is implemented through dysfunctional computer mediated communication. That means – analyzing a specificity and typologies of computer mediated communication (CMC) – one can tell a lot about features of electronic aggression that is simply distinguished from ordinary CMC by a hostile content targeted against others¹.

Until now a phenomenon of electronic aggression has been predominantly researched in young people. This is particularly true in case of pre-adolescents and adolescents as ICT users since the Internet in this group is mostly perceived as a medium for interpersonal communication² and frequently used in all developed and developing countries³. Additionally, a potential involvement of young people in electronic aggression (both as victims and perpetrators) is widely considered to be a serious risk for this group and one of the greatest dangers in the cyberspace as put forth by young Internet users⁴.

Individuals using the Net have almost constant access to a great number of other users and groups and have the possibility to contact them in at least three modes of communication: (1) one-to-one; (2) one-to-many and (3) many-to-many. That means that some communication activities are “private” as intended to be read only by a sender and a receiver while the other are public and all that was presented could be read/seen by a larger audiences sometimes referred in the literature as networked public⁵. The example of the first above mentioned possibility is an instant messenger talk of two peers. The second possibility is for instance a blog run by a teenager while the third possibility could be a simultaneous talk of many individuals in a public chat room. Moreover, new media provide measures that can be used to send and present multimedia contents: text, photo, video and audio files. Of course all those modes of CMC can be used to conduct electronic aggression. There is

¹ C. David-Ferdon, M. Hertz, *Electronic media, violence, and adolescents: an emerging public health problem*, The Journal of Adolescent Health: Official Publication of the Society for Adolescent Medicine, 2007, 41, 6 Suppl 1, p. 1-5.

² J. Heim, P.B. Brandtæg, B.H. Kaare, T. Endestad-Torgersen, *Children’s usage of media technologies and psychosocial factors*, New Media and Society, 2007, 9, p. 425-454.

³ S. Livingstone, L. Haddon, *EU Kids Online*, Zeitschrift Für Psychologie/Journal of Psychology, 2009, 217 (4), p. 236-239; A. Nocentini et al., *Cyberbullying: Labels, Behaviours and Definition in Three European Countries*, Australian Journal of Guidance and Counselling, 2010, 20 (2), p. 129-142.

⁴ M.C. Larsen, T. Ryberg, *Youth and Online Social Networking: From Local Experiences to Public Discourses*, [in:] *Youth culture and net culture: Online social practices*, eds C. Hällgren, E. Dunkels, G-M. Frånberg, Hershey 2011, p. 17-40.

⁵ D. Boyd, *Why Youth (Heart) Social Network Sites: The Role of Networked Publics in Teenage Social Life*, [in:] *Youth, Identity, and Digital Media*, ed. D. Buckingham, Cambridge 2007, p. 119-142.

at least some data proving that different media form of hostile content are more destroying than others – e.g. those including visual material that pictures a victim have been assessed by victims as more harmful⁶.

Another issue concerning electronic aggression goes beyond technical ways of conducting it. It is connected to social context of electronic aggression acts – namely the relationship between a perpetrator and a victim. The Internet provides a perpetrator with an access to a variety of other individuals. A young perpetrator can for example attack using the Internet those known from a traditional group (e.g. a class), online group (e.g. users of a particular Internet forum), or total strangers. In some large scale survey studies as EU Kids online or other American studies a phenomenon of online bullying is operationalized as hurting just “another person”⁷. Potential negative consequences on both a perpetrator’s and a victim’s side may differ based on a victim type. Therefore operationalizing this aspect in research seems to provide an added value in exploration of online aggression also in terms of prevention and intervention measures.

Moreover, aggression conducted via new media tools may differ in respect to formal features such as the regularity of the aggressive acts, imbalance of power between a victim and perpetrator(s) or intention to harm on the side of victims. Adopting those features in traditional, “real” world helps to distinguish bullying from general aggression⁸. Those features are also commonly used to distinguish cyberbullying from electronic aggression in general⁹. Additionally, electronic aggression sometimes is characterized by “new” features such as anonymity or publication of hostile materials¹⁰.

⁶ R. Slonje, P.K. Smith, *Cyberbullying: another main type of bullying?* Scandinavian Journal of Psychology, 2007, 49 (2), p. 147-154.

⁷ S. Livingstone, et al., *Risks and safety on the internet: The perspective of European children*. Full findings, 2011, Retrieved from: [http://www2.lse.ac.uk/media@lse/research/EUKidsOnline/EU%20Kids%20II%20\(2009-11\)/EUKidsOnlineIIReports/Final%20report.pdf](http://www2.lse.ac.uk/media@lse/research/EUKidsOnline/EU%20Kids%20II%20(2009-11)/EUKidsOnlineIIReports/Final%20report.pdf); J.W. Patchin, S. Hinduja, *Cyberbullying. An update and synthesis of the research*, [in:] *Cyberbullying prevention and response*, eds J.W. Patchin, S. Hinduja, New York 2012, p. 13-35.

⁸ E.g. C.P. Monks et al., Coyne I., *Bullying in different contexts: commonalities, differences and the role of theory*, Aggression and Violent Behavior, 2009, 14, p. 146-156; K.S. Stassen Berger, *Update on bullying at school: Science forgotten*, Developmental Review, 2007, 27, p. 90-126.

⁹ F. Mishna, R. Allagia, *Weighing the risks: A child’s decision to disclose peer victimization*, Children and Schools, 2005, 4, p. 217-226; A. Nocentini et al., *Cyberbullying: Labels, Behaviours and Definition in Three European Countries*, Australian Journal of Guidance and Counselling, 2010, 20 (2), p. 129-142; R.S. Tokunaga, *Following you home from school: A critical review and synthesis of research on cyberbullying victimization*, Computers in Human Behavior, 2010, 26, p. 277-287.

¹⁰ J.J. Dooley, J. Pyżalski, D. Cross, *Cyberbullying Versus Face-to-Face Bullying: A Theoretical and Conceptual Review*, Zeitschrift für Psychologie/Journal of Psychology, 2009, 217 (4), p. 182-188; A. Nocentini et al., *Cyberbullying: Labels, Behaviours*; P.K. Smith, *Cyberbullying and Cyber aggression*, [in:] *Handbook of School Violence and School Safety: International Research and Practice*, eds S.R. Jimerison, A.B. Nickerson, M.J. Mayer, M.J. Furlong, New York 2011.

All those aspects that help us to categorize electronic aggression are illustrated in Figure 1.

It is worth underlining that in numerous cyberbullying studies differ substantially when it comes to operationalization of the three aspects presented in Figure 1. For instance in some cases young respondents are asked whether they have perpetrated particular “technical” electronic aggression acts but they are not asked who was their victim or whether those acts have been characterized by bullying features¹¹.

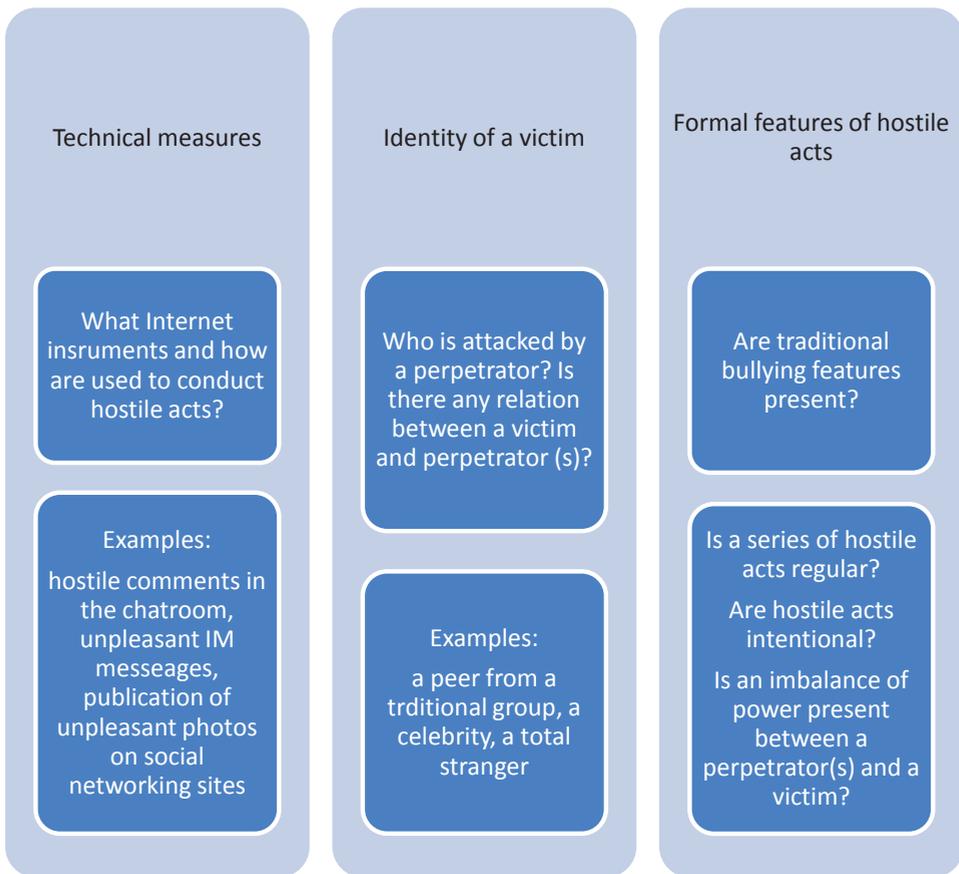


Fig. 1. Different ways to operationalize electronic aggression perpetrated by young people

The material presented in this article provides an empirical insight into electronic aggression acts conducted by adolescents. It is based on an empirical project that operationalizes electronic aggression on the basis of three aspects

¹¹ J.W. Patchin, S. Hinduja, *Cyberbullying*.

(criteria) presented above in Figure 1. However, in the data presented the focus will be put only on two aspects: victims' type and formal features of bullying present in some electronic aggression acts.

In the end it is worth to mention that there are other efforts to build typologies of electronic aggression based e.g. on proactive and reactive character of different kinds of this phenomenon¹².

Materials and methods

The empirical material presented in the article has been gathered in the project aimed at exploration of electronic aggression in adolescents. The research process was divided into two stages: (1) qualitative and (2) quantitative.

(1) Qualitative stage

The main aim of this phase was to explore electronic aggression and its determinants from the perspective of those who have experienced it – students and teachers. In case of students the description of experiences concerning perpetration and victimization of electronic aggression have been explored. Subsequently teachers have been asked about the situation where they had to intervene in cases of electronic aggression among their students. Additionally the university students (Education) were interviewed retrospectively on the cases of electronic aggression they had experienced or witnessed.

This part involved as participants:

- 50 Education students (retrospective interviews with those who experienced electronic aggression as victims, perpetrators and bystanders - recruitment was based on a prior short questionnaire basis).
- 50 teachers from primary and secondary who had to intervene personally in electronic aggression cases in the past - the sample here consisted on teachers contacted through personal relations, meetings at teachers' conferences, etc.

To gather data from those respondents the following methods were used: in-depth interviews, in-depth e-mail interviews and focus groups (N = 3).

Additionally, 15 e-mail interviews were completed with adolescent participants from one of the Polish Internet forums which was almost completely devoted to criticism (sometimes vulgar and harsh) towards other people as well as ten face-to-face interviews with 12 adolescents (aged 14-17) from a secondary school dedicated to adolescents experiencing developmental disturbances.

¹² D.M. Law et al., *Are Cyberbullies really bullies? An investigation of reactive and proactive online aggression*, *Computers in Human Behavior*, 2012, 28 (2), p. 664-672.

Additionally various unstructured observations and content analysis of forums and other internet sites used by adolescents were conducted.

All the data gathered through qualitative stage have been either recorded digitally (voice or texts in e-mail interviews) or recorded by written notes during interviews and coded appropriately. The data was gathered in years 2009 and 2010.

Using this “triangulation approach” both in terms of research methods and respondents helped to analyze and explore the electronic aggression phenomenon in a way that is not possible in quantitative research – through detailed analysis of actual cases and their psychological and social contexts¹³.

The data gathered at this stage was used to define typology of electronic aggression described at the beginning of a section presenting results as well as was the basis for preparation of valid tools for quantitative stage validating the quality and significance of the new typology.

It is worth underlining that although qualitative approach is rather rare in electronic aggression I has been already used by the scholars who has been conducting research that are purely qualitative¹⁴ or are designed in a way that qualitative data are used as additional information to understand primarily quantitative results¹⁵.

To maintain clarity of the article only the conclusions of the qualitative stage of the research – mainly typology of electronic aggression will be presented without citing the gathered material itself.

Quantitative stage

At the quantitative stage adolescents have been surveyed with a paper self-administered questionnaire. The research was carried out in randomly chosen secondary schools from 8 voivodships (regions) of Poland. It consisted of 2143 respondents – 1027 boys (48.72%); 1081 girls (51.28%); and 35 (1.66%) respondents who did not indicate their gender. Majority of the respondents were 15 y.o. in the year 2010 when the data was collected.

The questionnaire consisted of scales measuring electronic aggression and cyberbullying as factors hypothesized to be risk and protective factors for those phenomena. In this article only the instruments used for presentation of data in results section are described.

¹³ R.M. Kowalski, S.P. Limber, P.W. Agatson, *Cyber Bullying: Bullying in the Digital Age*, Malden, MA 2008.

¹⁴ E. Mishna, A. McLuckie, M. Saini, *Real world dangers in an online reality: a qualitative study examining online relationships and cyberabuse*, *Social Work Research*, 2009, 33 (2), p. 107-118; E. Mishna, M. Saini, S. Solomon, *Ongoing and online: children and youth's perceptions of cyberbullying*, *Children and Youth Services Review*, 2009, 31, p. 1222-1228.

¹⁵ R. Slonje, P.K. Smith, *Cyberbullying: another main type*.

Instruments

Electronic aggression and cyberbullying

Electronic aggression and cyberbullying were measured with Lodz Electronic Aggression Prevalence Questionnaire¹⁶. The questionnaire measures perpetration and victimization of electronic aggression in three aspects described in Introduction (Fig. 1):

1. Frequency of involvement in 20 different “technical” electronic aggression acts within a period of one year. Cronbach alpha = 0.91 for perpetration scale and 0.87 for victimization scale.

2. Frequency of involvement in different kind of electronic aggression distinguished by victims’ types.

3. Involvement in a peer electronic aggression that is characterized by bullying features (regularity, intention, imbalance of power).

Respondents have been asked to report electronic aggression and cyberbullying experiences within a year before gathering data.

The scales measuring protecting and risk factors presented below are mostly the Polish validated version of the scales in Flynt Adolescents study¹⁷.

Positive and negative norms in peer group

The scale measures how the respondent perceives the positive (for example those concerning good grades) and negative (for example concerning substances usage) norms as present in his/her peer group). Cronbach alpha = 0.84 for negative norms and 0.74 for positive norms.

Conflicts in a family

This scale measures to what extent a respondent assesses relationships within a family as hostile and aggressive (mostly in a sense of verbal aggression among family members). Cronbach alpha = 0.86

¹⁶ J. Pyżalski, *Lodz Electronic Aggression Questionnaire – a tool for measuring cyberbullying*, [in:] *The Good The Bad and The Challenging. The user and the future of information and communication technologies*, eds B. Sapio, L. Haddon, E. Mante-Meijer, L. Fortunati, T. Turk, E. Loos, Copenhagen 2009; J. Pyżalski, *Electronic aggression among adolescents: An old house with a new facade (or even a number of houses)*, [in:] *Youth culture and net culture: Online social practices*, eds C. Hällgren, E. Dunkels, G-M. Frånberg, Hershey 2011.

¹⁷ M. Zimmerman, K. Schmeelk-Cone, *A longitudinal analysis of adolescent substance use and school motivation among African American Youth*, *Journal of Research on Adolescence*, 2003, 13 (2), p. 185-210; K. Ostaszewski et al., *Raport techniczny realizacji projektu badawczego pn. Monitorowanie zachowań ryzykownych młodzieży. Badania mokotowskie*, Warszawa 2009; K. Ostaszewski, *Badania zachowań ryzykownych warszawskich gimnazjalistów. Koncepcja i metoda*, [w:] *Promocja zdrowia psychicznego. Badania i działania w Polsce*, red. K. Okulicz-Kozaryn, K. Ostaszewski, Warszawa 2010.

Attitudes toward school

This scale measures to what extent a student likes his/her school, school staff and the activities at school she/he is involved in. Cronbach alpha = 0.74.

Norms concerning online activities at school and at home

This scale has been designed for the present study. It measures whether at school and at home there are established and imposed rules concerning online behavior of young people. Cronbach alpha = 0.67 for home norms and 0.84 for school norms. This is a new scale constructed for the present study.

Level of self-esteem

Using this scales we measure whether a student thinks he/she accepts and value himself/herself highly and whether he she likes himself/herself. In this sense low self-esteem is connected to attribution style that is characteristic for depression. The sample questions are: *I am a happy person; I am disappointed with myself*. A respondent uses the continuum of answers from total disagreement to a total agreement. Cronbach alpha = 0.86.

Results

Below the types of electronic aggression recognized during the qualitative part of electronic aggression are presented. The focused is put on typology based on victims' types. Moreover in the descriptions also information on particular "technical" acts as well as involvement of traditional bullying features are mentioned.

Electronic peer aggression (cyberbullying)

Many students taking part in the interviews and focus groups admitted perpetrating different hostile acts online or via mobile phones against their peers. Such acts have been also frequently described in retrospective interviews by students as well as teachers.

Looking at technical descriptions of electronic aggression situation described by the respondents it may be concluded that those acts have been mostly simple and not very serious exchanges of communicates e.g. unpleasant short instant messenger or cell phone texts or harsh comments below photos in social networking sites.

In most cases the content of those messages has been connected to the offline conflicts and quarrels among students. It mostly concerned such issues as behaviour at school, romantic relationships and were often associated with unpleasant hostile acts e.g. name calling in the physical world. A majority of

respondents underlined that such acts were interpreted by them as not very serious and they have not confessed any serious emotional consequences. More “sophisticated” acts, involving a substantial workload on the side of a perpetrator or better computer skills were rather rare. For instance, one of the respondent teachers described the situation when someone set up a false profile of her student in the social networking site. Such behaviour is sometimes called in the literature impersonation¹⁸ and frequently presented as a kind of electronic aggression that bring serious psychological consequences on a victim’s side. One serious example of this kind of electronic aggression is a boy who stole a password from a networking site profile of a peer and was sending unpleasant comments to other users afterwards (including teachers from a school where he attended). Some of the victims were obviously blaming the actual owner of a profile who in this situation was also a victim of electronic aggression.

One of the adolescents described a case where his friends have recorded a film presenting an act of beating up another young person and then published it on the Net. This kind of electronic aggression also described in the literature is called happy slapping and is a kind of a merge between traditional and cyber aggression¹⁹. Generally, there were less cases described, also by the teachers where young perpetrators have been using public channels of communications when their material have been visible for numerous users. For instance one girl has been commenting family problems of a peer in social networking site profile of a victim which made the situation worse by revealing the sensitive information to hard to estimate number of potential viewers.

In many cases the acts described by the respondents have not been anonymous what is in line with some quantitative data showing that only some acts of electronic aggression possess this feature²⁰.

Most of the acts described by the respondents have not presented any of traditional bullying features or only some of them. Very often they were only single acts of not very serious consequences – so the regularity was not involved. In most situations the acts had a form of mutual communication exchanges – where both young people communicating were presenting more or less equal power with no signs of imbalance and subsequent helplessness of a victim. Lastly, in many cases those conducting actions were not presenting

¹⁸ R.M. Kowalski, S.P. Limber, P.W. Agatson, *Cyber Bullying*.

¹⁹ R. Saunders, *Happy slapping: transatlantic contagion or home-grown, mass-mediated nihilism*, *Static*, 2005, 1 (1), p. 1-11.

²⁰ S. Hinduja, J.W. Patchin, *Cyberbullying*; R.M. Kowalski, S.P. Limber, *Electronic bullying among middle school students*, *Journal of Adolescent Health*, 2007, 41 (6), p. 22-30; R.M. Kowalski, S.P. Limber, P.W. Agatson, *Cyber Bullying*..

any hostile intentions. They admitted to involve in such acts as a joke or hoax – sometimes learning about negative consequences on their victim's side later. For instance, a girl indicated that about the serious consequences of unpleasant short messages sent by her, she has realized for the first time when a victim described them during a class meeting. Another example is a boy who together with peers has been threatening another student by sending to him short "warning messages". Despite an obvious seriousness of this case a perpetrator describing the situation many times used wording such as "a hoax" or "a joke" and has shown no signs of self-criticism while referring to own aggressive behaviour.

Young persons taking part in the study have been also indicating different levels of relationship they have with a peer victims – e.g. former or actual romantic partners, close friends or young people they just know from school or a place where they live.

Electronic Aggression against Educational Staff

Closely connected to educational setting reality is electronic aggression against teachers and other educational staff. Obviously young people have sometimes "difficult" relations with school staff and sometimes there are certain teachers who are disliked by a number of students. A few respondents – particularly teachers described a lot of situations when one teacher or the whole staff has been attacked electronically by the students. For example one school headmaster described the case when one of the student was sending anonymously to the school e-mail address long letters insulting the teachers from his schools. Some teachers reveal also the situation when students were sending unpleasant messages using private channels – mostly short texts on mobile phones. There were also some really serious situations described – for instance a false advert with personal data of a female teachers published on the sex date site followed by a serious of unwanted telephone contacts received by the victim.

Electronic Aggression Against the Vulnerable

Some respondents during interviews admitted involvement in online aggression against people in a vulnerable life situation such as homeless, alcoholics, etc. This kind of aggression usually is perpetrated through production of short clips that are later published on the sites where users can present their videos (such as YouTube). The involvement of young people have at least two forms – firstly they were themselves producers of the aggressive materials – that was rather rare. More often they were active viewers – positively commenting or rating hostile videos – also praising the producers of the materials.

Analyzing the potential consequences of this kind of electronic aggression one should remember that actually it is a mix of offline and online aggressive acts. The content analysis of videos has shown that the seriousness of aggression presented by the producers of the clips differ substantially. In some cases young perpetrators threaten or insult the vulnerable victims while filming. Then in other cases they just make spontaneous shots of the vulnerable people's behaviour they assess as funny.

Analyzing this kind of aggression as media aggression makes this kind of aggression a serious issue. Due to psychological mechanisms it potentially endangers psychosocial and moral development of both perpetrators and viewers. First of all imbalance of power is present and attacking those who due to the life situation not only cannot protect themselves but are sometimes unaware of the harm they experience makes such acts even more unethical. The next thing is the fact that modeling of aggressive behaviour may be encouraged due to the fact that the viewers are similar (e.g. in terms of age) to the aggressors. Additionally the aggression presented is not fictional but is a real social act that is often reinforced by acceptance of the viewers (positive comments, high rating) which may give the viewers impression that those kinds of materials are commonly socially accepted.

Aggression Against Random Victims (Random Electronic Aggression)

A lot of respondents indicated that they attacked electronically people they have neither offline nor online relationships with. Such attacks were usually referred as spontaneous acts provoked by a comment or a behaviour of a victim they did not like, e.g. on internet forum or a chat. From this perspective such acts are isolated and impulsive. However, sometimes such reactions are very emotional and openly aggressive towards victims. It is worth underlining that such behaviour is almost always targeted against the victims totally unknown to a perpetrator. This anonymity refers here sometimes to such basic features as gender, age and place of living of a perpetrator. Respondents perpetrating this kind of aggression were sometimes indicating the potential low-risk concerning potential legal actions taken by a victim in order to identify and punish them.

Electronic Aggression Against Groups (Bias Cyberbullying)

Sometimes respondents were revealing attacking not individuals but the whole groups of people. They were for example publishing comments insulting fans or a certain music group or a football team. Those comments were often published in online places where a lot of potential viewers can see them, e.g. Facebook wall or as a comment on a public access forum. Although in this kind of electronic aggression a victim is not personalized – all

persons affiliating themselves to a certain insulated group may experience harm. This is of great importance also due to a fact that affiliation to groups of different kinds particularly peer groups is vital at a developmental stage of adolescence.

Electronic Aggression Against Celebrities

Another target of young perpetrators were celebrities such as actors, singers, etc. Electronic attacks of this kinds were almost never conducted through private channels of communication, which is understandable due to usual lack of personal contacts between celebrities and young perpetrators.. Most often respondents were writing harsh comments about celebrities on so called gossip portals where short scandalized messages concerning famous people are published. Sometimes such comments, texts or rarely visual materials were presented on the private perpetrators' blogs or profile in social networking sites.

Involvement in different kind of electronic aggression - a quantitative aspect

The research revealed that about 66% of respondents revealed a perpetration during a previous year at least one from 20 "technical" electronic aggression acts listed in the questionnaire. Those who were perpetrators have been then asked who was their target. The results concerning this are presented in table 1. The most prevalent is aggression against individuals known only from online environments (53.3%). Almost the same frequency applies to aggression against young people known from traditional groups - a school or a place where young people live - involvement in perpetration against such victims was indicated by almost half of the respondents. In case of one in three respondents the targets of electronic aggression were young people indicated by perpetrators as close friends. Three perpetrators out of ten reported, attacks on the Internet against totally randomly chosen individuals, while about one in five against a former romantic partner. About twenty percent of the perpetrators attacked not individuals but groups of people, Almost 14% of them confessed to attack celebrities and about the same rate attacked the vulnerable people, e.g. homeless or alcoholics. Approximately one in nine of those who perpetrated any electronic aggression during one year targeted teacher or other known adults.

Table 1

Percentages of perpetrators that targeted during a previous year certain types of victims

Type of a victim	Percent of 1 year perpetrators
People known only from the Internet	53.5
Young people known offline (from school, site of living) but no close friends	49.4
Close friends	33.6
Random persons/totally unknown	30.3
Former girlfriend/boyfriend	21
Not individuals but groups (e.g. fans of a certain band or football team)	19.7
Celebrities, e.g. actors, singers.	13.9
Vulnerable people (The homeless, alcoholics, etc.)	13.3
Teachers	11.3
Other known adults	11

Percentages in the table refer to those who reported to perpetrate at least one electronic aggression act during a recent year.

According to results presented in the table 2. One in three respondents has not attacked electronically during one year any of the indicated in the questionnaire types of victims. Almost one in four respondents targeted only one type of a victim, 16.8% - two types, and almost one in nine - three types. There was also a significant number of respondents targeting more types of victims - 6.3% - four types, 3.8% - five types and almost one in twenty respondents attacked 6 or more victims' types.

Table 2

Numbers of victims' types perpetrated by one respondent during a previous year

Number of types of electronic aggression the respondent was involved during 12 months before the study	Percent
0	34.3
1	23.2
2	16.8
3	10.9
4	6.3
5	3.8
6 and more	4.8

Cyberbullying as the specific kind of electronic aggression

Traditional bullying due to its constitutional features is understood as a serious type of aggression. Similarly cyberbullying should be perceived as a serious type of electronic aggression. For the purpose of this study cyberbullying has been operationalized as peer aggression taking place within a traditional group (typically a class) or online group (e.g. community of a certain forum) that additionally takes place regularly and for a longer period, is intentional and causes vulnerability on the side of a victim due to imbalance of power present. It is interesting that although more than 47% admitted to have attacked any of 3 peer targets (close friends; young people known from school/neighborhood or a former romantic partner) only 25% engaged in cyberbullying. That means young people undertake a lot of peer electronic aggression acts that do not cover one or more traditional bullying features. Young respondents mostly perpetrated cyberbullying once (about 15%). However one in twenty perpetrated cyberbullying 4 times or more during a year (table 3).

Table 3

Perpetration of cyberbullying in the last 12 months

Perpetration	Percent
Never	74.4
One time	14.9
2-3 times	5.7
4 times or more	5

As cyberbullying is a serious form of electronic aggression it was explored whether perpetrators of cyberbullying more frequently involve in aggression against different kinds of victims. In the table 4. There are connected the percentages of cyberbullying perpetrators involved in aggression against different kinds of victims to the percentages of involvement in this aggression by young people that had not cyberbullying experiences in a previous year (neither as bullies, cyberbullies and bully-victims). In case of all victims' types those who engaged in cyberbullying reported more frequent attacks against a particular kind of a victim (table 4).

Obviously cyberbullies very often indicated as targets young people known from offline world – mostly such peers who are not perceived by them as close friends (53.1%) but also close friends (32.9%) and former romantic partners (20.1%). At the same time cyberbullies quite often attack other kinds of victims. For instance over 53% admitted to target individuals known only

Table 4

Involvement of peer cyberbullies and those not involved in cyberbullying in electronic aggression against different kinds of victims

Perperation against	Percent of online bullies against peers	Percent of not involved in online bullying against peers	Chi square	p
Young people known from offline world but not close friends	53.1	24	152.37	p < 0.00001
People known only from the Internet	50	29.5	77.31	p < 0.00001
Close friends known from offline world	32.9	16.7	80.87	p < 0.00001
Totally unknown people, randomly chosen	27.9	16.1	58.69	p < 0.00001
Groups of people, e.g. fans of a particular music group.	25	8.9	78.24	p < 0.00001
Former boyfriend/girlfriend	20.9	8.7	126.97	p < 0.00001
Celebrities	15.9	6.4	53.39	p < 0.00001
Other people, e.g. homeless, alcohol addicted (the vulnerable people)	15.4	5.5	71.79	p < 0.00001
Other adults	14.4	4.3	78.03	p < 0.00001
Teachers	13.5	4.7	56.58	p < 0.00001

in the online environment, who in many cases could not restrict only o people of the similar age. Peer cyberbullies target also more often other types of victims – totally randomly chosen people (27.9%), groups of people (25%). Really substantial differences between a group of those who cyberbullied peers and those not involved in cyberbullying are observed in case of electronic aggression against adults. For example celebrities are attacked by 15.4% of cyberbullies and only 5.5% of not involved in cyberbullying. The same refers to teachers (13.5% versus 4.7%) and other adults (14.4% versus 4.3%).

Different kinds of electronic aggression and influencing factors

In the study it also has been explored whether the level of eight factors that were hypothesized be connected to online aggression vary among young people involved in different kinds of electronic aggression. The significance

of differences of means in a group of those involved in particular aggression type and those not involved has been calculated (table 5).

Table 5

Involvement in electronic aggression against different kinds of victims versus influencing factors

	Positive attitudes toward school	Positive peer norms	Negative peer norms	Negative relations in family	Norms concerning online activities at home	Norms concerning online activities at school	Self-esteem
Close friends known from offline world	Lower	Lower	Higher	Higher	Lower*	Not significant	Higher
Young people known from offline world but not close friends	Lower	Not significant	Higher	Higher	Lower	Lower	Higher*
People known only from the Internet	Lower	Lower	Not significant	Higher	Lower	Lower*	Not significant
Totally unknown people, randomly chosen	Lower	Lower	Higher	Higher	Lower*	Lower	Not significant
Teachers	Lower	Lower	Higher	Not significant	Not significant	Lower*	Higher
Other adults	Lower	Lower	Higher	Not significant	Lower	Lower	Higher
Former boyfriend/girlfriend	Lower	Lower*	Higher	Higher	Not significant	Not significant	Higher
Other people, e.g. homeless, alcohol addicted (the vulnerable people)	Lower	Lower	Higher	Higher*	Not significant	Not significant	Higher
Celebrities	Lower	Not significant	Higher	Higher	Not significant	Not significant	Higher*
Groups of people, e.g. fans of a particular music group	Lower	Lower	Higher	Higher	Lower	Not significant	Higher*

The table based on t-Student tests between groups of those involved and not involved in perpetration against particular kind of a victim. All p level < 0.01, except when marked *p < 0.05

Generally, involvement in electronic aggression against different types of victims is connected to the factors measured in the research in a way that is easily theoretically explained. Generally, young people attacking others online:

- 1) Have worse attitudes toward a school.
- 2) Less often report positive peer norms.
- 3) More often reports negative peer norms.
- 4) More often report negative hostile relations in a family.
- 5) Less often report existing of norms concerning online behaviour at home and at school.
- 6) Have higher self-esteem.

However there are some important exceptions to those general findings, namely:

1) Attacking close offline friends is not connected to online norms at school.

2) Attacking young people known offline is not connected to positive peer norms.

3) Attacking people known only from the Internet is not connected to negative peer norms and the level of self-esteem. The latter is also the case of attacking randomly chosen individuals on the Internet.

4) Attacking teachers and other adults is not connected to the level of negative relations in a family. Additionally attacking teachers is not associated with existence of online behaviour norms at home.

5) Aggression against celebrities, the vulnerable people and a former romantic partner is not connected to online norms both in a family and school setting. Additionally aggression against celebrities is not connected to existence of positive peer norms.

6) Aggression against groups is not connected to perception of online norms in school.

Discussion

The presented study used a broader perspective to analyse electronic aggression perpetrated by adolescents. This formed a basis to formulate a typology of electronic aggression perpetrated by this group – using three criteria: technical (what is actually done in new media), victims' identity (who

is attacked) and formal (what features are present in perpetrated acts). The qualitative data revealed that there are at least six different types electronic aggression based on victims' identity, namely: electronic peer aggression, electronic aggression against educational staff, electronic aggression against the vulnerable persons, random electronic aggression and electronic aggression against groups. Analysing a quantitative aspect of involvement in electronic aggression it is clearly seen that aggression against other young people is quite prevalent. As many as 66% of young people have attacked someone through new media during a previous year. However, analyzing this aspect deeper clearly shows that young people attack often other types of victims than peers. Moreover, even the victimized group that can be called "peers" varies since young perpetrators attack for example young people from traditional environments (both close friends and only "known individuals) or former partners. Therefore even the electronic aggression that takes place within a peer group may differ in terms of potential negative outcomes. It seems to be particularly true in case of attacking former partners, which is quite prevalent (21% of perpetrators). It can be speculated that importance of the first serious romantic relationships may cause the subsequent electronic aggression act a really destroying experience. Additionally, quite prevalent was a perpetration against people known only online – such perpetration has been reported by 53.5% of those young people who have been engaged in at least one act of aggression during a previous year. Additionally, one in four perpetrators performs electronic aggression against random persons, without a clear motive for a hostile behaviour. Those kinds of aggression in the online environment are really a challenge for prevention and intervention activities as it is totally out of traditional social offline context. Quite often young perpetrators attack also other types of victims as celebrities, groups of people or the vulnerable personalities. To conclude this aspect of research it should be stated that electronic aggression is not a homogenous phenomenon in terms of a context connected to a relationship between a victim and perpetrators – with each type of electronic aggression involving different mechanism and bring different potential social and psychological consequences.. This fact should be obviously take into account in research projects since there is a risk that we will be too general (not specifying a kind of victim in research) or specifying it too narrowly (a student)²¹. This need is backed up by the data concerning a parallel perpetration of aggression against different kinds of victims by the same adolescent perpetrator. Such situation is prevalent and in 5% perpetrators concerns more than 6 types of electronic aggression victims

²¹ E.g. J.W. Patchin, S. Hinduja, *Cyberbullying. An update and synthesis.*

within one year. Another issue is engagement in a peer aggression that possess formal features of traditional bullying – involving regularity, imbalance of power and negative perpetrators' intentions²². The research shown that it is less prevalent that electronic aggression in general – but still one in four adolescent has been involved in such behaviour within a year. Cyberbullying should be treated as a core electronic aggression type since those engaged in cyberbullying really often target also other kinds of victims than peers.

Analyzing risk and protective factors of electronic aggression against different victims we can see some interesting findings. Firstly, for different kinds of electronic aggression protective and risk factors differ. For instance, norms concerning online behaviour at home and school seem not to be connected to electronic aggression against the vulnerable people or celebrities. Secondly there is an interesting role of self-esteem. This factor, often interpreted positively seems to have an ambiguous role in electronic aggression perpetration since perpetrators of aggression against all victims' types (except people known only online, and random victims) scored higher on this feature. This fact could be explained by both dependent and independent variable. The level of self-esteem may stem from perpetration experiences as well as be an encouraging factor for a perpetration engagement.

Looking for effective methods to prevent electronic aggression it is vital to address tailored actions taking into account its different types as well as different mechanisms involved in them. Focusing only on peer cyberbullying seems to be insufficient strategy that overlooks other important electronic aggression acts that are conducted by adolescent perpetrators.

It the end it is worth to mention two important limitations of this study: (1) it is correlational study – that means all casual links between variables may be only speculative; (2) it has been conducted in a particular social and cultural environment – that means some results particularly from qualitative stage may not be applicable to another environments.

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BIBLIOGRAPHY

Boyd D., *Why Youth (Heart) Social Network Sites: The Role of Networked Publics in Teenage Social Life*, [in:] *Youth, Identity, and Digital Media*, ed. D. Buckingham, The John D. and Catherine T. MacArthur Foundation Series on Digital Media and Learning, MA: MIT Press, Cambridge 2007.

²² P.K. Smith, *Cyberbullying and Cyber aggression*.

- David-Ferdon C., Hertz M., *Electronic media, violence, and adolescents: an emerging public health problem*, The Journal of Adolescent Health: Official Publication of the Society for Adolescent Medicine, 2007, 41, 6 Suppl 1.
- Dooley J.J., Pyżalski J., Cross D., *Cyberbullying Versus Face-to-Face Bullying: A Theoretical and Conceptual Review*, Zeitschrift für Psychologie/Journal of Psychology, 2009, 217 (4).
- Heim J., Brandtæg P.B., Kaare B.H., Endestad-Torgersen T., *Children's usage of media technologies and psychosocial factors*, New Media and Society, 2007, 9.
- Kowalski R.M., Limber S.P., *Electronic bullying among middle school students*, Journal of Adolescent Health, 2007, 41 (6).
- Kowalski R.M., Limber S.P., Agatson P.W., *Cyber Bullying: Bullying in the Digital Age*, Blackwell Publishers, Malden, MA 2008.
- Larsen M.C., Ryberg T., *Youth and Online Social Networking: From Local Experiences to Public Discourses*, [in:] *Youth culture and net culture: Online social practices*, eds C. Hällgren, E. Dunkels, G-M. Frånberg, PA: IGI Global, Hershey 2011.
- Law D.M., Shapka J.D., Domene J.F., Gagné M.H., *Are Cyberbullies really bullies? An investigation of reactive and proactive online aggression*, Computers in Human Behavior, 2012, 28 (2).
- Livingstone S., Haddon L., *EU Kids Online*, Zeitschrift Für Psychologie/Journal of Psychology, 2009, 217 (4).
- Livingstone S., Haddon Görzig L., Ólafsson K., *Risks and safety on the internet: The perspective of European children*. Full findings, 2011, Retrieved from: [http://www2.lse.ac.uk/media@lse/research/EUKidsOnline/EU%20Kids%20II%20\(2009-11\)/EUKidsOnlineIIReports/Final%20report.pdf](http://www2.lse.ac.uk/media@lse/research/EUKidsOnline/EU%20Kids%20II%20(2009-11)/EUKidsOnlineIIReports/Final%20report.pdf)
- Mishna F., Allagia R., *Weighing the risks: A child's decision to disclose peer victimization*, Children and Schools, 2005, 4.
- Mishna E., Saini M., Solomon S., *Ongoing and online: children and youth's perceptions of cyberbullying*, Children and Youth Services Review, 2009, 31.
- Mishna E., McLuckie A., Saini M., *Real world dangers in an online reality: a qualitative study examining online relationships and cyberabuse*, Social Work Research, 2009, 33 (2).
- Monks C.P., Smith P.K., Naylor P., Barter C., Ireland J.L., Coyne I., *Bullying in different contexts: commonalities, differences and the role of theory*, Aggression and Violent Behavior, 2009, 14.
- Nocentini A., Calmaestra J., Schultze-Krumbholz A., Scheithauer H., Ortega R., Menesini E., *Cyberbullying: Labels, Behaviours and Definition in Three European Countries*, Australian Journal of Guidance and Counselling, 2010, 20 (2).
- Ostaszewski K., Bobrowski K., Borucka A., Cybulska M, Kocóń K., Okulicz-Kozaryn K., Pisanska A., *Raport techniczny realizacji projektu badawczego p.n. Monitorowanie zachowań ryzykownych młodzieży. Badania mokotowskie*, Instytut Psychiatrii i Neurologii w Warszawie, Zakład Psychologii i Promocji Zdrowia Psychicznego, Pracownia Profilaktyki Młodzieżowej „Pro-M”, Warszawa 2009.
- Ostaszewski K., *Badania zachowań ryzykownych warszawskich gimnazjalistów. Koncepcja i metoda*, [w:] *Promocja zdrowia psychicznego. Badania i działania w Polsce*, red. K. Okulicz-Kozaryn, K. Ostaszewski, Instytut Psychiatrii i Neurologii, Warszawa 2010.
- Patchin J.W., Hinduja S., *Cyberbullying. An update and synthesis of the research*, [in:] *Cyberbullying prevention and response*, eds J.W. Patchin, S. Hinduja, Taylor and Francis, New York 2012.
- Pyżalski J., *Lodz Electronic Aggression Questionnaire – a tool for measuring cyberbullying*, [in:] *The Good The Bad and The Challenging. The user and the future of information and*

- communication technologies, eds B. Sapio, L. Haddon, E. Mante-Meijer, L. Fortunati, T. Turk, E. Loos, COST, Copenhagen 2009.
- Pyżalski J., *Electronic aggression among adolescents: An old house with a new facade (or even a number of houses)*, [in:] *Youth culture and net culture: Online social practices*, eds C. Hällgren, E. Dunkels, G-M. Frånberg, PA: IGI Global, Hershey 2011.
- Saunders R., *Happy slapping: transatlantic contagion or home-grown, mass-mediated nihilism*, *Static*, 2005, 1 (1).
- Slonje R., Smith P.K., *Cyberbullying: another main type of bullying?* *Scandinavian Journal of Psychology*, 2007, 49 (2).
- Smith P.K., *Cyberbullying and Cyber aggression*, [in:] *Handbook of School Violence and School Safety: International Research and Practice*, eds S.R. Jimerson, A.B. Nickerson, M.J. Mayer, M.J. Furlong, Routledge, New York 2011.
- Springhall J., *Youth, popular culture and moral panics: Penny gaffs to gangsta-rap. 1830-1996*, St. Martin's Press, New York 1998.
- Stassen Berger K.S., *Update on bullying at school: Science forgotten*, *Developmental Review*, 2007, 27.
- Tokunaga R.S., *Following you home from school: A critical review and synthesis of research on cyberbullying victimization*, *Computers in Human Behavior*, 2010, 26.
- Twemlow S.W, Sacco E.C, Williams P., *A clinical and interactionist perspective on the bully-victim-bystander relationship*, *Bulletin of the Menninger Clinic*, 1996, 60.
- Zimmerman M., Schmeelk-Cone K., *A longitudinal analysis of adolescent substance use and school motivation among African American Youth*, *Journal of Research on Adolescence*, 2003, 13 (2).

