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## **Cyberbullying as a negative result of cyber-culture of Slovak children and adolescents: selected research findings**

**Katarína Hollá**, Constantine the Philosopher University, Slovakia  
kholla@ukf.sk

### **Abstract**

Cyber-culture points out the life in cyberspace and goes beyond national cultures. It is particularly attractive for the young people who use Information and Communications Technologies (ICT) to express their attitudes, values, beliefs and thinking. Those do not need to be necessarily in accordance with the standards of an individual society. Cyber-culture becomes dangerous. Great risk lies in cyberbullying that represents negative impact of cyber-culture on human behavior. The aim of the study is to detect cyberbullying as a negative impact of cyber-culture among of Slovak children and adolescents. The research was carried out on a sample of 1619 11-18-year old respondents (average age was 14.51). Results of cyberbullying research carried out using Latent Class Analysis (LCA) have proved the appropriateness of 3-latent-class module. Relative entropy of the module reached 0.915. It was demonstrated that 52.9% of respondents belonged to the group of uninvolved, 42.7% were victims and 4.4% were victims-aggressors. Being a negative consequence of cyber-culture, cyberbullying is a challenge that educators – including other assisting professions – face when educating children and adolescents to orientate in cyberspace, behave responsibly, express themselves in a way that would not interfere others' integrity and identity (personal and virtual). The study was written under VEGA MŠVVaŠ SR a SAV č. 1/0244/15: "Detekcia a riešenie kyberšikany".

**Keywords:** Adolescents, cyber-culture, cyber-aggression, cyberbullying, children, LCA, mMedia education, research

### **Introduction**

Today's generation, also called 'digital' or Z Generation, is moving its meaning of life from the real world to the cyberspace. People's interactions in the cyberspace lead to the creation of global and unified cyber-culture. Cyber-culture is rooted in the hacker groups whose action in the cyberspace is based upon the

specific forms of behavior, i.e. preferring self-fulfillment in the virtual world. The term cyber-culture firstly appeared in 1990s. Bell (1999), Lévy (2000) and Manovich (2001) paid particular attention to this term, trying to introduce its definition and outline its concepts and characteristics. In the Czech Republic, Macek (2004), Sak et al. (2007), Soukup (2010), Hartmanová & Šmahaj (2015) studied the specifics of cyber-culture. Cyber-culture represents the new phenomenon of the digital age. Agreeing with Sak et al. (2007), the cyber-culture is considered a significant source of socialization of people in 21<sup>st</sup> century, especially of children and young people. Present-day generation finds cyberspace and cyber-culture framing within an attractive environment. Children and adolescents share their attitudes, values, beliefs, as well as their way of thinking by everyday usage of information and communications technologies. The extension of virtual world gives children and adolescents an opportunity to free themselves from the restrictions referring to their age, and provides them with the information and interactions far beyond the influence of their family and school. At the same time, the dynamic media development makes online communication more flexible and accelerates the access to the information. However, living in a cyberspace has its bright and dark sides. Lévy (2000) stresses the cyberspace and cyber-culture framing within could produce isolation of people, stress arising from cognitive stall, occurrence of addictions (non-chemical, non-substance addictions), new forms of conformability, etc.

Cyberbullying emerging as new (mostly hidden) form of aggression represents the negative consequence of cyber-culture. In a few years, cyberbullying has spread to the chat rooms, instant messaging, websites, etc. First studies focusing on cyberbullying emerged in the USA (Aftab, 2006, Hinduja, & Patchin, 2007, 2009, 2012; Willard, 2007; Kowalski et al., 2008). Cyberbullying is nowadays spread over the world and it is therefore internationally discussed as a global problem. In the last few years, several studies dealing with the scope, prevalence and measurement of cyberbullying in individual countries emerged (Kopecký, 2016; Brighi, & Melotti et al., 2012; Menesini, Nocentini, & Calussi, 2011). Intercultural researches such as the analyses of latent classes of cyberbullying done in six European countries – Poland, Spain, Italy, Great Britain, Germany and England (Schultze-Krumbholz et al., 2015); or the research of definition of cyberbullying done in another six European countries – Italy, Germany, Spain, Sweden, Estonia and France (Menesini et al., 2012) have been carried out in recent years. The important pan-European research was conducted by the EU Kids Online network focused on the online safety in Austria, Belgium, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Lithuania, the Netherlands, Norway,

Poland, Portugal, Romania, Slovenia, Spain, Sweden, Turkey and the UK. Now the network includes 33 countries, adding Croatia, Iceland, Latvia, Luxembourg, Malta, Russia, Slovakia and Switzerland (Haddon & Livingstone, 2012).

It is not the phenomenon concerning the American continent; unfortunately it penetrates to all the continents including the European. In relation to the researches and the real situations accompanying cyber bullying on the American continent, the team of investigators started to work on the project called The CyberTraining – Taking action against Cyber bullying (2008-2010). The partial reports released in 2009 presented the overview of the situation in the particular countries focused on country's description, socio-demographic aspects, use of ICT, system of education of particular country, prevalence and measures of bullying, studies and researches on cyber bullying and its prevention.

Cyberbullying represents behavior that includes harassment, threatening, stalking or humiliating or any other negative behavior of an individual or a group through the internet, interactive and digital technologies or mobile devices. This behavior is intended to hurt the victim (embarrass, humiliate, etc.) by means of general insults, homophobic, sexist, racist and other discriminating prejudices. S. Hinduja and Patchin (2009) define cyberbullying as an wilful and repeated harm inflicted via computers and other electronic devices. The authors admit that their definition is not perfect and could be extended with "repeated harms inflicted through the use of mobile phones" (Hinduja & Patchin, 2012, p. 33).

In relation to the use of information and communication technologies in the process of cyberbullying, the definition of the authors could be explicitly specified as repeated aggressive attacks via computers, mobile phones and other electronic devices.

Vandebosch and Cleemput (2008) claim it is necessary to shape a clear definition of cyberbullying that would comply with the view of students, since the lack of conceptual transparency could lead to the situation when the professionals' and respondents' view of the phenomenon would differ. Proceeding from the analysis of the particular definitions we explicate cyberbullying as "aggressive behaviour that includes torturing, threatening, stalking, humiliating and other negative children or adult behaviour against the victim(s) through the repeated attacks via computer, mobile phone or other electronic devices with the content causing emotional harm" (Hollá, 2013, p. 17).

Since the aggressor and the victim are unequally skilled in using ICT, the victim is exposed to the negative online material in a long term.

Based on literary references, traditional bullying is divided into four types of classes:

- a) uninvolved people,
- b) victims that are solely the target of bullying,
- c) aggressors that are solely perpetrators of bullying,
- d) victims-aggressors that become victims and perpetrators of bullying simultaneously (Schultze-Krumbholz et al., 2015).

Following researchers' claims of cyberbullying as the subtype, or extension of traditional bullying (e.g. Olweus, 2012), we can discuss the division of cyberbullying into four classes, as well. Results of empirical research made by Schultze-Krumbholz et al. (2015) point out that the structure of cyberbullying differs from traditional cyberbullying. Using LCA method on the sample of 6260 students from six European countries ( $M = 14.8$  years;  $SD = 1.6$ ; 49.1% boys) it was shown that cyberbullying can be divided into three classes.

### **Goals**

The study was aiming to identify and classify the cyberbullying behavior of pupils into several categories using LCA method and characterize those categories (subtypes) by demographic variables (sex, age, type of school). Following pupils' division into three latent classes CB1 – CB3, sex, age and type of school, we studied if there were some differences among those 3 classes according to the above mentioned variables. The classification of a pupil in the latent class represents dependent variable, while CB3 represents reference category (uninvolved pupils). Independent variables are represented by sex (girls as reference category), type of school (grammar school as reference category) and age acting as a covariance, therefore it has no reference category.

### **Method and measures**

The research was carried out using the questionnaire called Cyberbullying and Online Aggression Survey Instrument (2010 version, Hinduja & Patchin, 2012). Cyberbullying and Online Aggression Survey Instrument represents a survey instrument which maps the occurrence of cyberbullying and sexting through Likert scale (0 – never, 1 – once, 2 – sometimes, 3 – often, 4 – everyday). We created two multi-item scales while analyzing research data. First scale was designed to cyber-aggressive behavior while the second one to cyber-victim. In each scale, pupils had 8 items at their disposal to express how often they experienced different forms of behavior over last 30 days. Each item contained 5-point scale (0 – never, 1 – once, 2 – twice, 3 – three times, 4 – four times and more) which they had to use for stating if they were aggressors or victims of

cyberbullying. Statistical programs MPlus 7.0, Statistica 8, SPSS 21 were used to create the analyses. We transcoded pupils' responses into trichotomous variables: 0 = "never", 1 = "once or twice", 2 = "three times or more" for the purposes of this analysis and to compare the results with other studies (see Schultze-Krumbholz et al., 2015).

We analyzed the responses of pupils on 16 questionnaire items. First 8 items referred to aggressive behavior of pupils in cyberspace over last 30 days. Another 8 items reflected the first ones, however, they were intended to find out whether pupils were victims of other pupils' aggressive behavior.

Table 1: Cyberbullying questionnaire items titles

| Cyber-aggressor             |  |
|-----------------------------|--|
| B2                          | I posted mean or hurtful comments about someone online                                       |
| B3                          | I posted mean or hurtful image (photograph) of someone online                                |
| B4                          | I posted mean or hurtful video of someone online   |
| B5                          | I created mean or hurtful website about someone online                                       |
| B6                          | I spread rumors about someone online   |
| B7                          | I threatened to hurt someone via text messages   |
| B8                          | I threatened to hurt someone online  |
| B9                          | I pretended to be someone else online and acted in that way that was mean or hurtful to them |
| Cyberbullying victimization |  |
| A2                          | Someone posted mean or hurtful comments about me online                                      |
| A3                          | Someone posted mean or hurtful image (photograph) of me online                               |
| A4                          | Someone posted mean or hurtful video of me online  |
| A5                          | Someone created mean or hurtful website about me online                                      |
| A6                          | Someone spread rumors about me online  |
| A7                          | Someone threatened to hurt me via text messages  |
| A8                          | Someone threatened to hurt me online   |
| A9                          | Someone pretended to be me online and acted in a way that was mean or hurtful                |

### Participants

Research sample comprises 1619 elementary and high school students (boys – 43.1%, girls – 56.9%) representing all Slovak regions relatively equally. Participants were 11 – 18 years old, forming the average age 14.51. Elementary school pupils represented the majority (55.4%) while high school students represented 44.6%.

Table 2: Research sample structure

| Region          | N    | Sex  |       | Type of School |     |     | Age             |
|-----------------|------|------|-------|----------------|-----|-----|-----------------|
|                 |      | Boys | Girls | ES             | HS  | GS  | Mean (SD)       |
| Bratislava      | 205  | 102  | 103   | 131            | 70  | 4   | 14.55 (SD=2.31) |
| Trnava          | 202  | 62   | 140   | 108            | 81  | 13  | 14.50 (SD=2.30) |
| Trenčín         | 202  | 91   | 111   | 111            | 84  | 7   | 14.48 (SD=2.29) |
| Nitra           | 202  | 92   | 110   | 113            | 76  | 13  | 14.49 (SD=2.29) |
| Žilina          | 204  | 97   | 107   | 104            | 72  | 28  | 14.44 (SD=2.31) |
| Banská Bystrica | 209  | 87   | 122   | 110            | 94  | 5   | 14.51 (SD=2.31) |
| Prešov          | 200  | 75   | 125   | 107            | 64  | 29  | 14.50 (SD=2.29) |
| Košice          | 195  | 93   | 102   | 113            | 53  | 29  | 14.60 (SD=2.26) |
| <b>Total</b>    | 1619 | 699  | 920   | 897            | 594 | 128 | 14.51 (SD=2.29) |

Note: ES = elementary school, HS = high school, GS = grammar school, SD = standard deviation

### Procedure

We use the Latent Class Analysis (LCA) to analyze subcategories of cyberbullying engagement. LCA is multi-dimensional statistical method of data analysis. LCA refers to a procedure of identifying categorical latent variable through the set of examined categorical variables. Population is thus considered a set of subpopulations – classes, while the examined variables provide incomplete information about the division of individual entities or people into the respective subpopulations. In the latent class model and in the case of one categorical variable, the latent variable is of categorical type. Population is divided into subpopulations in order to eliminate variable dependencies in there.

First, we identify the engagement in cyberbullying using LCA method and then analyze the influence of demographical variables (sex, age and school type) to divide the pupils into respective classes. For this purposes we use multinomial logit model. LCA was created using Mplus program. Based on pupils' responses on the items, we aimed to identify the appropriate number of latent classes using LCA method. We gradually analyzed various LCA models for increasing number of classes. We chose the appropriate model respecting statistical indicators of model quality and compliance with theoretical assumptions. Selection of the appropriate number of latent classes was based upon statistical criteria – Akaike

information criteria (AIC), Bayesian information criteria (BIC), Adjusted Bayesian information criteria (aBIC), log-likelihood and relative entropy. In case of the model with equal or very similar quality parameters it is more appropriate to prefer simple model.

## Results

The same method was used to verify appropriateness of particular latent class on the sample of 1619 respondents ( $M = 14.51$  years,  $SD = 2.29$ ; 43.17% boys).

Table 3: Quality rates of different LCA models for cyberbullying ( $N = 1619$ )

| No. of classes | AIC     | BIC     | aBIC    | Log-likelihood | Relative entropy |
|----------------|---------|---------|---------|----------------|------------------|
| 2 classes      | 20639.7 | 20990.0 | 20783.5 | -10254.9       | 0.866            |
| 3 classes      | 19203.3 | 19731.5 | 19420.1 | -9503.6        | 0.915            |
| 4 classes      | 18770.2 | 19476.2 | 19060.0 | -9254.1        | 0.885            |
| 5 classes      | 18614.9 | 19498.8 | 18977.8 | -9143.4        | 0.877            |

Note. AIC = Akaike information criteria; BIC = Bayesian information criteria; aBIC = Adjusted BIC. Classes in bold indicate the most appropriate model.

Table 3 shows the information about quality of tested models (AIC, BIC, aBIC, log-likelihood, entropy) for different class numbers. Evaluating the quality of particular models demonstrates that 3-class LCA model is the most appropriate for the case of cyberbullying. Relative entropy of this model is 0.915 which is considered relatively high number.

Following their responses (0 = "never"; 1 = "once or twice"; 2 = "three or more times over 30 days") transcoded to items, the respondents were divided into 3 classes (groups).

The largest was the class of uninvolved pupils formed by 52.9% of all pupils. All the pupils in this class show very high probability (in each item at least 93%) to score 0 (Chart 1 – CB2). It means not to become victim or initiator of any form of cyberbullying (A2-A9; B2-B9).

Chart 1: Charts of probability profiles of particular latent-class items: CB2

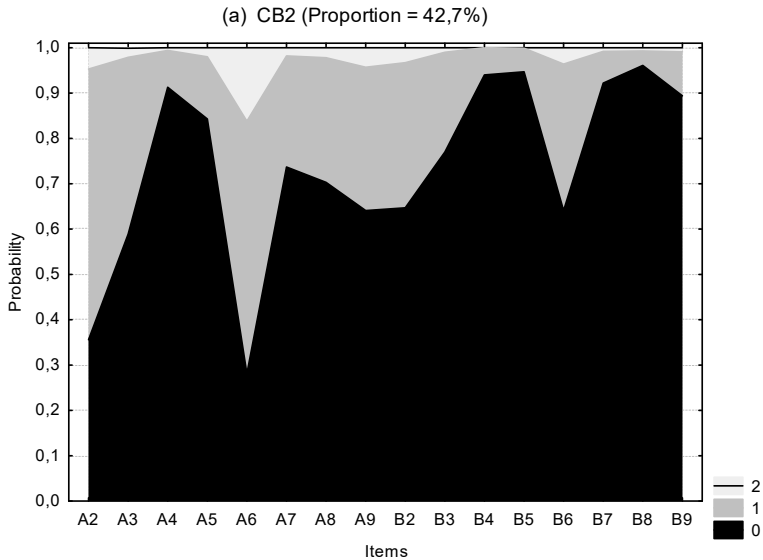


Chart 2: Charts of probability profiles of particular latent-class items: CB1

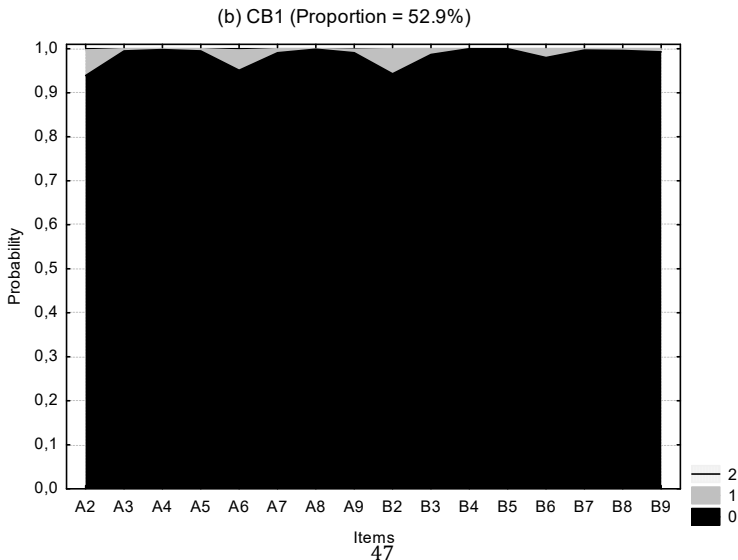
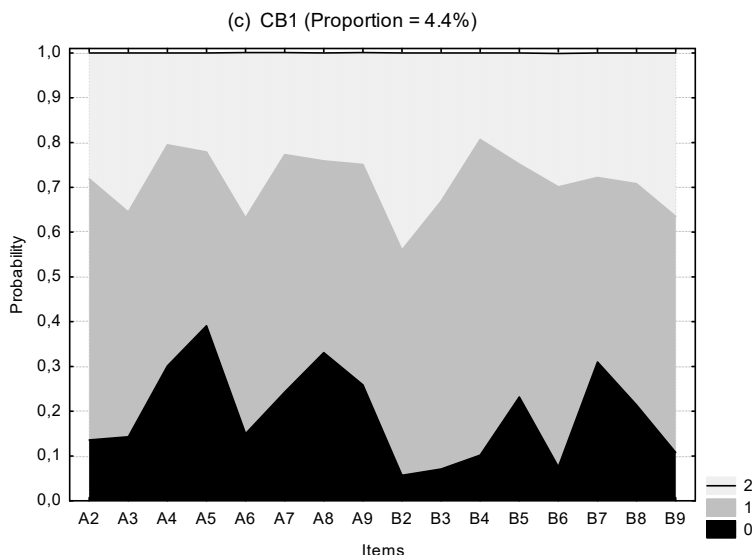




Chart 3: Charts of probability profiles of particular latent-class items: CB1



Another class comprises 42.7% of the total number of students who became victims and perpetrators of cyberbullying (Chart 2 – CB1). Pupils in this class are relatively very likely to become victims of false information on the internet (A6), offensive insults on the internet (A2) and the acts of impersonation (A9), more or less once or twice over past 30 days (Code 1). Pupils in this class become victims of cyber-aggression more frequently than aggressors.

The last 3rd class is the smallest in number (4.4% of research sample), however, it represents pupils that show considerably strong likelihood of committing cyber-aggression. Simultaneously, pupils also become frequent victims of cyber-aggression. We can observe strong likelihood of repeating such activity (Code 2), mainly through offensive insults on the internet (B2), insulting photographs on the internet (B3) and impersonation (B9).

### Relations between class categorization

The results of multinomial logit model (Table 4) demonstrate that, compared to girls, boys are 7.37-times ( $p < 0.001$ ) more likely to become perpetrators (CB1) than not to be involved in cyberbullying; and 1.11-times ( $p = 0.298$ ) more likely to become victim-aggressor (CB2) than uninvolved participant of cyberbullying

(CB3). It could be observed that lowering the age of pupils, they are 0.761-times ( $p = 0.008$ ) less likely to become perpetrators than to be in the class of uninvolved; and they are 0.97-times ( $p = 0.415$ ) less likely (basically the same) to get into the class of victim-perpetrator than to get into the class uninvolved. According to the type of school, compared to grammar school students, elementary school pupils are 0.971-times ( $p = 0.971$ ) less likely to become cyberbullying perpetrators than to be uninvolved; and they are 0.729-times ( $p = 0.164$ ) less likely to be victim-aggressor than to be uninvolved. Compared to grammar students, high school students are 6.05-times ( $p = 0.019$ ) more likely to be perpetrators than to be uninvolved; however, they are 0.79-times ( $p = 0.258$ ) less likely to be victims-aggressors than to be uninvolved.

Table 4: Estimate of multinomial logit model parameters

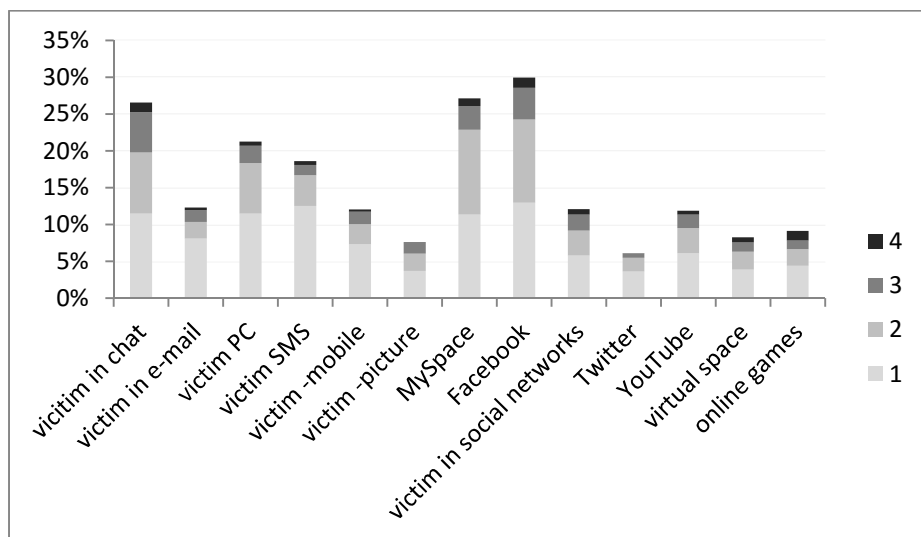
| Cyberbullying <sup>a</sup> |           | B              | SE    | Wald   | df | Sig.  | Exp(B) | 95% CI for Exp(B) |            |
|----------------------------|-----------|----------------|-------|--------|----|-------|--------|-------------------|------------|
|                            |           |                |       |        |    |       |        | Min. limit        | Max. limit |
| CB1                        | Intercept | -0.862         | 1.824 | 0.223  | 1  | 0.636 |        |                   |            |
|                            | Age       | -0.273         | 0.104 | 6.926  | 1  | 0.008 | 0.761  | 0.622             | 0.933      |
|                            | [boys]    | 1.998          | 0.322 | 38.566 | 1  | 0.000 | 7.377  | 3.926             | 13.860     |
|                            | [girls]   | 0 <sup>b</sup> |       |        | 0  |       |        |                   |            |
|                            | [ES]      | -0.029         | 0.811 | 0.001  | 1  | 0.971 | 0.971  | 0.198             | 4.761      |
|                            | [HS]      | 1.801          | 0.766 | 5.530  | 1  | 0.019 | 6.054  | 1.350             | 27.152     |
|                            | [GS]      | 0 <sup>b</sup> |       |        | 0  |       |        |                   |            |
| CB2                        | Intercept | 0.504          | 0.649 | 0.604  | 1  | 0.437 |        |                   |            |
|                            | Age       | -0.031         | 0.038 | 0.664  | 1  | 0.415 | 0.970  | 0.901             | 1.044      |
|                            | [boys]    | 0.110          | 0.106 | 1.082  | 1  | 0.298 | 1.116  | 0.907             | 1.373      |
|                            | [girls]   | 0 <sup>b</sup> |       |        | 0  |       |        |                   |            |
|                            | [ES]      | -0.316         | 0.227 | 1.939  | 1  | 0.164 | 0.729  | 0.467             | 1.138      |
|                            | [HS]      | -0.232         | 0.205 | 1.279  | 1  | 0.258 | 0.793  | 0.531             | 1.185      |
|                            | [GS]      | 0 <sup>b</sup> |       |        | 0  |       |        |                   |            |

Note: ES = elementary school, HS = high school, GS = grammar school, B – estimate of model parameter, SE – standard deviation of model estimate, Wald – test statistics value, a. – reference category (CB3), b. – null (redundant) parameter (it is reference category)

### Cyberbullying and cyberspace

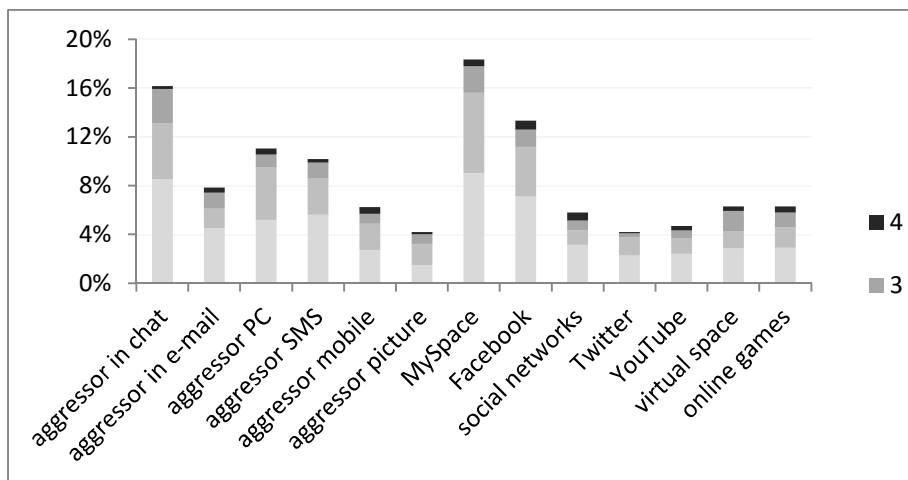
Being a consequence of cyberculture developing in cyberspace, cyberbullying has a negative impact on the individual and also on the society. In the following part, we monitor the occurrence of cyberbullying in individual sub-categories of virtual world. The following diagrams demonstrate the occurrence of cyber-victims and cyber-aggressors as per the environment and the choice of responses (1 – once, 2 – twice, 3 – three times, 4 – four times and more).

Graph 1: Victims of cyberbullying and cyberspace



The research has shown that most victims of cyberbullying happen to be on Facebook social network. Since Facebook is nowadays very popular cyberspace where the individuals create their own cyber identity and collaborate on creating cyberculture, it is clearly understandable that Facebook is a dominating network. Surprisingly, more than 25% of respondents became the victims of cyberbullying not only on Facebook but also on MySpace at least once in the referred period.

Graph 2: Aggressor cyberbullying and cyberspace



The case of cyber aggressors is similar to the case of cyber victims. An interesting comparison is demonstrated on the diagrams of cyber aggressor and cyber victim. The data of cyber aggressor's diagram are always lower. Almost 30% of respondents became the victims of cyberbullying on Facebook social network whereas only 13% of respondents declared themselves the aggressors on Facebook social network. The reason may be that the adolescents do not consider themselves or their behavior aggressive. Another reason also may be that they are not cyberbullied by students present in the target group but by other Facebook users. At the same time, it is surprising to see the aggressive attacks by Slovak respondents on MySpace social network. The above-mentioned fact indicates that today's digital generation uses social networks, as a part of the cyberspace, as much as the other sub-categories of the cyberspace.

### **Conclusions and discussion**

The study is the first that discusses the latent class analysis of cyberbullying in Slovak Republic. The aim was to classify the behavior of the students in case of cyberbullying within particular classes using LCA method. Also, several foreign studies (Wang et al., 2012; Schultze-Krumbholz et al., 2015) discuss the latent class analysis of various forms of inappropriate behavior, including cyberbullying.

Remarkably, people in Perpetrator class could more likely witness frequent acts of violence than in Victim–Aggressor class that proves mid likelihood of verbal attacks (insulting, false information) and of relational aggression (excluding from online environment). The second, Victim–Aggressor class is characterized by higher range of victims than perpetrators. It is more likely for pupils in this class to become victims than to become perpetrators. It does not have to be necessarily truth since the self-evaluation of an individual's actions could mostly seem more moderate than other people's actions targeted against this individual.

Results from latent class analysis point out boys, compared to girls, become perpetrators more frequently. The results of existing foreign researches differ. Several studies show that girls become cyberbullying perpetrators more frequently (e.g. Kowalski et al., 2008) while other studies proved the opposite (Vandebosch et al., 2006; Hinduja & Patchin, 2012; Schultze-Krumbholz et al., 2015). Based on the references, it is clear that girls use different forms of cyberbullying than boys. Boys use direct forms opposite to indirect forms of cyberbullying used by girls.

Studies about the research of cyberbullying do not provide appropriate gender differences of aggressors. The research process showed that boys reached more significant score of growing cyberbullying rate in the age of 13 to 17. Boys most frequently committed cyberbullying in the age of 17. Girls, on the other hand, proved slightly increasing cyberbullying rate in the age of 12 to 14 and subsequently in the age of 16. From the aspect of gender, statistically more significant score at cyber-aggressor level was proved in boys rather in girls. However, it does not necessarily mean that girls are not committing or suffering cyberbullying. Raskauskas and Stoltz (2007) pointed out that gender is not that significant indicator of involving in cyberbullying. Meta analysis carried out by Card et al. (2008) demonstrated that boys are physically more aggressive than girls and use also physical attacks when committing cyberbullying (e.g. threats of physical violence via online communication, happy slapping, etc.). Girls frequently have strong verbal skills and can attack using the form of electronic text. Several foreign studies drew the attention to the fact that girls commit cyberbullying more often (e.g. Kowalski et al. 2008; Hinduja & Patchin, 2009), while other studies proved the difference (Vandebosch et al., 2006).

Our research did not proved the differences in forms of cyberbullying as per gender. Most frequent form of cyberbullying committed by boys included sending offensive insults via internet (28.9%), sending false information (24.3%) and sharing controversial photographs via internet (19.6%). Similar forms have been reported by the victims of cyberbullying. Girls most often cyberbullied in a form

of posting false information (17.9%), sending insulting messages and comments (17.6%) and sharing controversial photographs via internet (11.1%).

Based on the results of the research, we can conclude that cyberbullying as a negative consequence of cyber-culture occurs also in Slovak Republic. It is necessary to draw the attention to this phenomenon and find the ways of prevention and to intervention of cyberbullying within school and after-school educational activities. Information platform forms the ground for sensitization of the public, particularly the people the prevention of cyberbullying is designed for (children, youth, parents, teachers, educators and other assisting professions). Significant importance in education process is laid on activities and tasks that help pupils to get information about inappropriate behavior, online threats, consequences, cyberbullying, and also to provide methods and solutions to eliminate this risk behavior.

As Sak et al. (2007) stresses, the society and government focus on ICT equipment and information competence. The task for educators is to prepare the new generation for the life in the information society, in the world of reality and cyberspace. It is necessary to find new ways of education of children and youth that would respect education trends of the society and help young people to orientate in new environment. This task is more complex due to the fact that teachers, educators and parents are learning to live with new phenomena – cyberspace and cyber-culture, as well as to react on the related online negative phenomena.

Media Education would be seen as a great help. The aim of Media Education is to “learn all age groups to get reliable approach to media and media content, to use new communication technologies and to protect underage children against illegal and inappropriate content” (2009). However, the issue may lie in inadequate expertise and skills of Media Education teachers. We suppose the role of Media Education is played similarly by Ethics Education and other subjects where students – as consumers and creators of new cyber-culture could learn about cyberspace threats and thus be led to a reliable use of ICT. We agree with the stimulus to create the culture of null tolerance of aggressive behavior (its forms and manifestations). However, it would involve the interest and cooperation of educators, psychologists, sociologists, lawyers, IT specialists, etc.

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## Contact

PaedDr. Katarína Hollá, PhD.

Department of Pedagogy

Faculty of Education, Constantine the Philosopher University

Dražovská 4, 949 74 Nitra, Slovakia

kholla@ukf.sk