Cyber-Bullying Factors and Psychological Measures of Prevention

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Abstract-The purpose of the article is to describe main factors of cyber-bullying compared to traditional bullying. The features of it are intention to harm, power imbalance, repeated actions, and all participants' demographics. The method used in the study is Buss-Durkee Hostility Inventory (BDHI). As Buss-Durkee questionnaire should be used in conjunction with other techniques, we used Acceptance of Others Scale, designed to diagnose the level of acceptance of other people, especially among children and adolescents. Both questionnaires were adapted for different ages, so the results show different demographics and attitudes. According to the results of the study it was easy to recommend coping strategies to overcome bullying and its after-effects. The need for coping strategies appears in crisis situations and is designed to reduce psychological stress and anxiety, the intensity of which is due to two circumstances - the subjective factor and the actual situation.

Keywords - bullying, cyber-bullying, aggression, coping strategies, prevention program

I.   INTRODUCTION

Interaction of children and adolescents through modern gadgets have increased significantly, but there are few mechanisms for controlling time spent in social networks as well as quality of information consumed in these networks. There are numerous risks children and adolescents are exposed to, as they contact people with anonymous identity, and download the content of dubious quality [1]. It is important for children and adolescents to be aware of other participants' aggressive behavior in communication. Important is their choice of coping strategies to stand up against aggression. Research on adolescents' behavior in the Internet also warns about aggression age decrease because it is easy to open an account in social networks and get access to digital devices to interact with strangers, it emphasizes the need to develop and implement preventive measures [2]. It is important to ensure publicity of cyber-bullying problems. Risks and consequences for the victim, the bully and the witnesses of the incident should be given evidence of; the school community should be timely informed, the facts of cyber-terror should be widely discussed, all the participants of bullying should be informed about effective coping strategies. It is important for preventive programs and coping intervention strategies to be supported by the counselors and psychologists; by the family and educational community. Bullying and cyber-bullying can be prevented using an interdisciplinary approach or as part of a program for basic and secondary education [3]. Currently, there is an urgent need in research of specific areas that contribute to this phenomenon management, such as possible coping strategies to prevent cyber-bullying, adults' knowledge of and attitudes to, as well as responsibility for problem solution. The research contributes to filling many gaps in this area for developing intervention coping programs.

Family and education environments are fundamental factors in cyber-bullying prevention, since children behavior is provoked in traditional harassment situations. Special emphasis is placed on involving family and school in prevention programs. It was proven that students participating in traditional bullying are also involved in cyber-bullying. Some studies show that teachers and parents underestimate cyber-bullying reported by outside witnesses, so it is recommended to actively involve teachers in prevention programs to help them find the best way to deal with it [4]. It is recommended to analyze the consequences of bullying for victims, because it causes melancholy, anger, hopelessness, poor school performance and concentration problems [5]. Researches show family conflicts to cause general victimization, aggression between peers. Similarly, researches emphasize time teenagers spend in the Internet which is directly proportional to risk for children to become victims of cyber-bullying [6].

II.   PARTICIPANTS OF BULLYING AND CYBER-BULLYING

Our research indicates importance of evaluating all aspects of bullying, such as demographics, gender, age, social status etc., because they may cause additional difficulties in prevention bullers' aggressive actions and victims' emotional feedback. We point out importance of choosing coping strategies for intervention in cyber-bullying situations, emphasizing the importance of developing social and conflict resolution skills, given that research findings show that among the predictors of cyber-bullying participation in traditional bullying as a bully or a victim, as well as poor family relationships, are key factors. The proposed intervention programs cover different areas of interdisciplinary work involving members of educational community, developing skills for managing anger, learning to interact in social networks, using computer and interpersonal communication skills. Prevention programs pay particular attention to seeking help if children claim to

be victims of cyber-bullying, because timely provided support can stop the torment. It should be taken into account that adolescent boys are more involved in cyber-bullying than girls. According to statistics, the percentage of boys affected by cyber-bullying is higher than girls. In turn, boys are more often involved as bullers in this form of aggression (see Fig. 1). Interviews reveal the most common forms of cyber-bullying, such as sending abusive messages via a mobile phone. The study shows that important factors in taking sides in bullying are the Internet use frequency, emotional and behavioral characteristics of adolescents. Cyber-bullying consequences for victims include both emotional and physical effects, which cause not only psychological but also somatic complications: chronic pains, difficulty concentrating, sleep disturbance, low body resistance, dizziness, etc. [7]. Researches show that low academic performance and attendance become a precondition for becoming a cyber-bullying victim, but there are still not enough experimental data, so more research is needed to deepen the relationship between these two variables [8].

Besides the bully and the victim, an unlimited number of witnesses are involved in cyber-bullying. Our study shows that there are socio-cognitive and contextual factors explaining these observers' lack of reaction to the bullying they are witnessing, but no special surveys have been administered. However, in currently available studies, simulations have been carried out where adolescents witnessed cyber-bullying and were asked to imagine that they were their friends or relatives. In these simulations, witnesses learned to confront the aggressor and report the situation to adults [9]. Other studies show that most children and adolescents who witnessed cyber-bullying events prefer to remain passive, not understanding the seriousness of the incident.
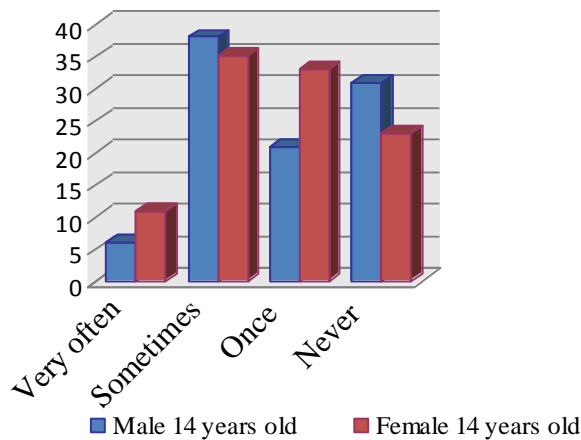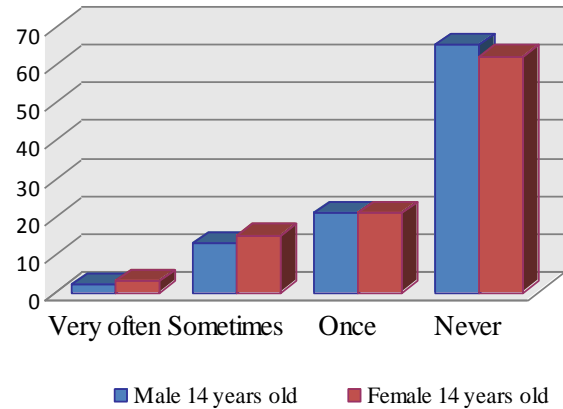

Fig 1. Traditional bullying versus cyber-bullying

In the program on bullying prevention suggested by our research team children and adolescents learn how to take the victim's side and to resist the aggressor. The importance of such work with witnesses of cyber-bullying events is highly determined by the risk that later they may be involved in bullying as victims or bullies. Coping strategies counteract cyber-bullying as well as promote understanding and proper handling of positive intervention tools in the implementation of any mediation or pedagogical intervention will certainly play a decisive role. Decision-making skills are very important in such programs [10]. Bullies have low social recognition and social and emotional life difficulties that cause aggressive actions against peers using electronic gadgets. The survey carried out to determine the level of aggression provided the following data (see Table 1).

TABLE 1. THE LEVEL OF AGGRESSION DEPENDING ON GENDER AND AGE

Aggression %	Below normal	Normal	Above normal
Females (20 years old)	53	33	14
Males (20 years old)	26	56	18
Females (18 years old)	29	44	27
Males (18 years old)	23	39	38
Females (16 years old)	21	40	39
Males (16 years old)	18	31	51
Females (14 years old)	13	31	56
Males (14 years old)	23	49	28

Cyber-bullying attitudes and perceptions interact as misbehavior determinants; male and older students are more actively involved in cyber-bullying. The correlation between a positive attitude towards cyber-bullying and anonymity of this harassment should be emphasized [11]. In connection with ineffective coping and no ways of dealing with cyber-bullying, these behaviors main determinants are: age, gender, previous victimization experience, family conflicts, emotionality, and sadism. Studying these factors can suggest the best coping program in educational environment. Also, studies have found such factors as lack of moral values; low empathy, depression

symptoms, victimhood, lack of self-control, low self-esteem, tension and frustration, as well as early behavioral problems, deviation and lack of social support (see Table 2).

TABLE 2. AGGRESSION AND TENDENCY TO VIOLENCE RATIO DEPENDING ON GENDER AND AGE

Aggression and tendency to violence ratio %	Below	Equal	Above
Females (20 years old)	16	47	37
Males (20 years old)	9	65	26
Females (18 years old)	22	56	22
Males (18 years old)	10	80	10
Females (16 years old)	33	61	6
Males (16 years old)	38	49	13
Females (14 years old)	28	44	28
Males (14 years old)	16	66	18

Our research contributes to striving against cyber-bullying in terms of the relationship between traditional school bullying and harassment via electronic devices by suggesting prevention programs. The results of surveys show: traditional bullying is transferred to social networks; verbal bullying among adolescents and children is transferred to mobile phones, therefore communication management should be viewed as a basic measure. Prevention programs focus on maintaining school discipline by explaining the fact that school violence does not contribute to a healthy atmosphere. The experimental program has developed an action plan focused on security and most effective and safe ways of socialization and communication in social networks.

III.   METHODOLOGY

At initial stage of experiment study, 135 pupils of secondary schools in the city of Taganrog and 19 first-year college students of Taganrog Institute of Management and Economics were respondents in the surveys and questionnaires. The experiment involved 48.4% of school girls and 51.6% of boys; 45.2% of females and 54.8% of male students. Most of them were of the age between 15 and 19. In the survey, adolescents report using a computer and other electronic devices from 1 to 3 hours per day (79.5%), and also admit having own mobile phones (98.1%). An adapted questionnaire on school aggression Buss-Durkee Hostility Inventory [12], determining the level of aggressiveness of children in an educational environment was used. Aggressiveness refers to the property of a person, characterized by presence of destructive tendencies, mainly in interpersonal relations field. The survey was administered anonymously; socio-demographic aspects included age, gender, and socio-economic status. It included 36 points with two possible answers - "yes" or "no". As a result, differentiated manifestations of aggression and hostility were identified in the form of following reactions. The survey questions were divided into eight factors and evaluated on 8 scales: 1. physical aggression - physical force against other people; 2. indirect aggression - indirect way to deal with other people; 3. irritation - readiness for the manifestation of negative feelings at the slightest arousal; 4. negativism - an

oppositional manner in behavior from passive resistance to active struggle against established customs and laws; 5. offense - envy and hatred for real and imaginary actions; 6. suspiciousness ranges from mistrust and caution towards people to belief that other people have planned to cause harm; 7. verbal aggression - the expression of negative feelings through the form of expression and through the content of verbal responses; 8. guilt – expression of the subject's possible conviction of being bad as well as remorse of conscience. This technique shows that aggression, both as a property of a person and aggression as behavior act can be understood in the context of a psychological analysis of person's motivational sphere. Therefore, the Buss-Durkee questionnaire should be used in conjunction with other techniques, in our study the Acceptance of Others Scale [13] was applied by a research team during one school day in a participating school and a college.

TABLE 3. ACCEPTANCE OF OTHERS SCALE (WILLIAM F. FEY)

Gender and age correlation%	High	Medium with tendency to high	Medium with tendency to low	Low
Females (20 years old)	9	33	46	12
Males (20 years old)	28	41	23	8
Females (18 years old)	38	36	20	6
Males (18 years old)	41	39	17	13
Females (16 years old)	16	37	33	14
Males (16 years old)	19	42	22	17
Females (14 years old)	11	26	44	19
Males (14 years old)	7	38	29	26

First, we obtained calculations of the frequency of all socio-demographic questions, elements of the Fey scale, as well as the percentage of answers, the mean and standard deviation of each of the options. Second, the link between cyber-bullying and traditional bullying, for which the Pearson correlation between factor 8 and the other factors of the questionnaire was calculated. Finally, for each factor, mean and standard deviations were calculated to determine the most common types of aggression.

IV.   RESULTS OF THE STUDY

According to research results, violence via devices tends to occur rarely or never. Some students report having witnessed this type of violence many times and always (see Table 1). The percentage of students who reported having witnessed this type of violence is between 3.0% and 8.2%. The most common type of ICT-related violence is when students record or photograph classmates with their phone cameras to tease them. 8.2% students say that they have witnessed similar behavior sometimes, 6.6% students report

that they have witnessed it many times and always. The least reported type of bullying is downloading embarrassing photos with abusive captions or videos to the net. The most often reported type of ICT-related violence is when students send messages to classmates containing direct insults or threats. 3.2% students reported having witnessed a similar type of bullying from time to time, and 1.5% students reported seeing it many times and always. The less frequently reported school abuse is downloading offensive photos or videos to the net.

V. RECOMMENDATIONS TO SCHOOLS – PARTICIPANTS OF THE STUDY

Parents, teachers, and other professionals who work with children need to be equipped with knowledge about children's reactions and coping strategies to be applied in order to deal with this phenomenon [14]. The coping strategies mechanisms arise as an individual's response to problems resulting in depression as their consequence. Coping strategies aimed at solving intrapersonal and interpersonal problems help overcome life difficulties, reduce stress or resolve conflicts. Coping strategies are associated with efforts to regulate stressful events emotional effects. The coping behavior is implemented through various coping strategies based on the resources of an individual and environment [15]. One of the most important resources of the environment is social support. Personal resources include a positive self-esteem, low neuroticism, an optimistic outlook, empathic potential, an affiliated tendency, locus control and other psychological constructs [16, 17]. Five emotion-oriented coping strategies include: denial; avoidance; acceptance of responsibility; implementation of self-control; positive revaluation. Personal activity in overcoming life difficulties is one of the signs of mental health. Passive avoiding style most often correlates with insufficient mental maturity, emotional instability, and lack of frustration endurance. Problem-oriented coping actions are considered maladaptive in crisis conditions.

VI. CONCLUSION

Our study results show that cyber-bullying phenomenon has just appeared in Russia, whereas traditional bullying is widespread in educational environment. These data contrast with previous studies in which the prevalence of cyber-bullying and cyber-victims over traditional bullying is confirmed [21]. The results, consistent with the previous researches, analyze the high probability of the Internet misuse and the effects of cyber-bullying among children and adolescents, as well as their psychological and behavioral effects. The study also confirm that due to behavioral changes, loss of control over the situation, the emergence of guilt feelings, social isolation, there are family conflicts or a decrease in the performance of adolescents.

According to D. Olweus [18], bullying is a phenomenon of violence between peers, characterized by persistence, premeditation and imbalance of physical strength or social

power between the aggressor and his victim. Cyber-bullying is a bullying form characterized by repeatability and evaluation, intentional, mediated and aggressive action or behavior carried out by a group or an individual using information and communication technologies as a tool. The proposed cyber-bullying prevention program includes educational work, emphasizing knowledge about features of this environment importance. It is closely related to communication technologies, establishing relationships between people. Schools face a difficult task to use ICT for the development of imagination, creativity, communication systems, access to information, teaching methods while that access to the Internet carries many risks such as the vulnerability of private life and violence. In accordance with the above, the prevention program proposed for educational institutions participating in this study includes: 1. systematic work on the formation of communication skills preparing students for communication, both personal and through technical means, communication skills development and the ability to solve conflicts; 2. preventive programs for working with emotions, anger management, interaction in social networks; 3. safety of students while using social networks; 4. integration of technological resources that facilitate work with children and adolescents in the educational environment, digitalization of textbooks and teaching aids, digital resources such as instructional videos, educational platforms, educational activities and online discussion forums.

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REFERENCES

[1] D. Cross, A. Barnes, A. Papageorgiou, K. Hadwen, L. Hearn, & L. Lester. A social-ecological framework for understanding and reducing cyberbullying behaviours [D]. Aggression and Violent Behavior, 2015, 23: 109–117.

[2] D. Koroleva Current research of modern teenagers presence in social networks as an important part of communication [D]. Modern Western psychology, 2016, V. 5, № 2: 55–61.

[3] A.O Andreeva. Manipulations in the Internet // Information security and problems of cyber extremism among young people [A]. Moscow, 2015: 21-28.

[4] T. Beran, & Q. Li.The relationship between cyberbullying and school bullying [T]. The Journal of Student Wellbeing, 2007, 1:16–33.

[5] Y. Y. Huang, & C. Chou. Revisiting cyberbullying: Perspectives from Taiwanese teachers [Y]. *Computers and Education*, 2013, *63:* 227–239.

[6] G. Bailey. Cyberbullying: Victimization through Electronic Means [G]. *Current Issues in Middle Level Education*, 2013, *18*(181): 1–7.

[7] A. Tsitsika, M. Janikian, S. Wójcik, K. Makaruk, E. Tzavela, C. Tzavara. Cyber-bullying victimization prevalence and associations with internalizing and externalizing problems among adolescents in six European countries [A]. *Computers in Human Behavior*, 2015, *51*(PA):1–7.

[8] K. Kopecký & R. Szotkowski. Cyberbullying, cyber aggression and their impact on the victim – The teacher [K] *Telematics and Informatics*, 2017, *34*(2): 506–517.

[9] C. Katzer, D. Fetchenhauer, & F. Belschack. Cyberbullying: who are the victims? A comparison of victimization in Internet

chatrooms and victimization in school [C]. *Journal of Media Psychology,* 2009, *21*(1): 25-36. https://doi.org/10.1027/1864-1105.21.1.25

[10] K. Allison, & K. Bussey. Cyber-bystanding in context: A review of the literature on witnesses' responses to cyber-bullying [K]. *Children and Youth Services Review*, 2016, *65*, 183–194.

[11] I.G. Malkina-Pyh. Behavior strategies in stress [I]. Moscow psychological Journal, 2016, №12.

[12] A. H Buss, A. Durkee. An inventory for assessing different kinds of hostility [A]. *Journal of Consulting Psychology* 1957, 21: 343-348.

[13] F. William Fey. Acceptance by others and its relation to acceptance of self and others: A revaluation [F]. Journal of Abnormal Psychology 1955, 50(2):274-6.

[14] H. Machackova et al. Effectiveness of coping strategies for victims of cyber-bullying [H]. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace,* 2013, *7*(3), article 5.

[15] G. Soldatova, E. Zotova. Cyber-bulying in school environment: problems and coping strategies [G]. Educational policies, 2011, № 5 (55):11–22.

[16] E. Makarova, A. Osadchaya. Cyber-bullying as school bullying option and coping strategies to overcome it [E]. Modern Research of Social Problems, 2018, V. 9, №8: 88-104.

[17] E. Makarova, A. Osadchaya. Cyber-victimization and demographic characteristics of adolescents involved in cyber-bullying [E]. National Health. 2019. № 1. pp. 125-136.

[18] D. Olweus. Bullying or peer abuse at school: Facts and intervention [D]. *Current Directions is Psychological Science*1995, *4*: 196-200.