PRZEGLĄD PSYCHOLOGICZNY, 2021, TOM 64, Nr 2, 121–137
DOI: 10.31648/pp.7841

# IMPACT: 10 lessons reducing peer cyberbullying – the psychological aspect

Anna Szuster*
*Faculty of Psychology,*
*University of Warsaw*

ABSTRACT

**Purpose**
The article aims to present an application project, IMPACT, whose implementation was founded by the National Centre for Research and Development in 2015–2018. The authors discuss the phenomenon of peer violence, indicate the premises of the research project, together with its outcomes, and present its practical results in the form of ten lessons aimed at preventing negative peer behaviour, especially cyberbullying.

**Theses**
Violence in electronic media is a widespread phenomenon that can be reduced / limited through educational projects that incorporate the phenomenon's complex psychological mechanisms.

**Conclusions**
The IMPACT project constitutes an evidence-based set of educational tools which is perceived by its beneficiaries as both attractive and efficient. The project owes its high level of effectiveness foremost to the interdisciplinary cooperation between researchers (psychologists and educators) and practitioners.

**Keywords:** cyberbullying, peer violence, preventive measures, self-control, empathy, perspective taking, project evaluation.

## INTRODUCTION

Cyberbullying is understood to be a new kind of peer aggression which occurs in the digital space. According to the report of the Polish Supreme Audit Office

* Corresponding address: hanka@psych.uw.edu.pl. Reanalyses for the project evaluation were financed from the statutory funds of the Faculty of Psychology, BSP/2020.

(NIK), it is one of the two fastest growing pathological phenomena and one of the biggest challenges facing Polish schools. At the same time, the report notes the weakness of the prevention efforts (NIK, 2014). Consequently, there is a need to develop new empirically verified guidelines for counteracting and preventing cyberbullying that take into account the specificity of this new type of violence.

## Partners, implementers, and co-workers: practitioners and researchers of peer cyberbullying

A group of researchers from the Faculty of Psychology of the University of Warsaw (Julia Barlińska, PhD, and Professor Anna Szuster (prof. dr hab.)), the Institute of Occupational Medicine in Łódź (Professor Jacek Pyżalski (prof. dr. hab.), and Piotr Plichta, PhD), the Warsaw University of Technology (Krzysztof Gołofit, PhD, and Magdalena Szerzyńska, PhD) came up with an idea to submit an application for financing for a project concerning peer cyberbullying prevention to the National Centre for Research and Development (NCBiR). It was assumed that the project's output would be a programme of lessons aimed at students of lower-secondary schools (*gimnazja*). The project team was also expanded by addition of a group of practitioners from the Praesterno Foundation, which focuses on addiction prevention (Jan Latkowski, MA, Tomasz Kowalewicz, MA), and the Nobody's Children Foundation (currently: Empowering Children Foundation; Łukasz Wojtasik, PhD, Iwona Leszczyńska, MA, Szymon Wójcik, MA). Consequently, the project's implementers had diverse and complementary competences. Researchers from the University of Warsaw (UW) and the Institute of Occupational Medicine (IOM) were responsible for conducting studies and analyses supporting the diagnosis of the problem. The practitioners from the Empowering Children Foundation were in charge of the implementation part, including the adaptation of the exercises to the level of lower-secondary school students, designing the graphics for the materials used in the lessons, performing editorial work on the handbook for teachers, and contacting teachers. The Praesterno Foundation was the project leader responsible for organisation of the research, recruitment of participating schools and teachers, as well as development, implementation, and analysis of the project evaluation. All partners were involved in the training programme for teachers interested in implementing the lesson programme in their schools. Such organisation of people and tasks was a guarantee of implementation of not only the research part of the project, but, above all, its application and implementation aspects.

## What is IMPACT – the concept and premises of the prevention project

IMPACT is an acronym proposed by Professor Jacek Pyżalski, a specialist in peer cyberbullying. It is not only the name of the project, but also a way of drawing attention to its application potential – its impact in terms of reducing negative behaviour of young people in the digital space.

**IMPACT** stands for the Interdisciplinary Model of Counteracting Aggression and Technological Cyberbullying.[2]

The decision to make the project interdisciplinary was motivated by the belief that the phenomenon of peer cyberbullying is complex, diverse, multi-faceted, and, at the same time, universal and common. Interdisciplinarity is understood as collaboration of specialists from various fields (educators, psychologists, but also e.g. IT specialists, lawyers, and police officers) in the process of development and implementation of projects. On the other hand, multifacetedness means, for example, that activities are targeted both at specific children (e.g. victims of bullies) and the class and school community as a whole, and include everyday activities and less frequent ones – implemented as part of specific campaigns, both proactive and reactive ones. The complexity of the issue is evidenced by the variety of forms in which aggression is expressed, verbally and physically, online and off-line, as well as the multiple mechanisms responsible for regulating this type of behaviour (more often regulated through automatic rather than reflexive channels – Kahneman, 2011). At the same time, the research on cyberbullying indicates (Pyżalski, 2012; Smith, 2016) that due to its scope and degree of pervasiveness (mainly due to the digital media and tools) the problem can be perceived as universal. Its universality is expressed by its "lack of nationality", as the same patterns and manifestations of behaviour are reproduced, regardless of the culture.

These conditions motivated the creation of the first integrated project against cyberbullying which combines psychological (UW), pedagogical (IOM) and technological (WOT) aspects.

## Cyberbullying – understanding the phenomenon and its consequences

Even after almost 15 years of research history, there are still problems with defining cyberbullying, which arise from adoption of different defining criteria, the simplest and most common of which is the use of ICT tools, mainly the Internet, to carry out hostile actions against others.

Cyberbullying can be considered through the prism of its three areas of analysis (Pyżalski, 2013b): the new media tools employed, the relationship between the victim and the perpetrator, and the formal characteristics of the violence committed.

For this project, it was assumed that peer cyberbullying involves a wide range of online tools used by the perpetrator, which modify the potential for

[2] Lesson plans and materials developed for the IMPACT project can be found on the FDDS website. General information about the project is available at: https://www.praesterno.pl/programy-biezace/cyberprzemoc, while the materials can be found at: https://impact.fdds.pl.

victimisation (hostile communication expressed directly to the victim or concerning the victim, e.g. comments on a social networking site). Both textual and visual communication may be used (photos or videos that portray the victim in a bad light). The victim may be subject to other hostile acts, such as identity theft or having their secrets revealed to the public. Finally, cyberbullying has formal features which are similar to those characteristic for traditional peer violence (bullying), i.e. it is essentially a long-term action (taken repeatedly against the same victim), it involves an imbalance of power (the perpetrator is stronger than the victim or at least that is the victim's impression) and the actions are intentional (performed with the aim of causing hurt) (Barlińska, Plichta, Pyżalski, Szuster, 2018).

**Peer cyberbullying** is defined as a sequence of acts of aggression undertaken intentionally and repeatedly against another person who cannot defend themselves (feels helpless in this context). The perpetrators, victims and witnesses of peer cyberbullying are young people functioning in either online or offline groups (Barlińska, Szuster, Winiewski, 2013, 2018; Pyżalski, 2012, 2014; Tokunaga, 2010).

The negative impact of cyberbullying has multiple dimensions:
- individual – as it poses a serious threat to the proper psychological and health functioning of the individuals involved (Fletcher et al., 2014);
- social – as it is an extremely harmful type of interpersonal violence leading to deterioration of social relations (Barlińska, Szuster, 2014; Pyżalski, 2012);
- global – as it poses a challenge for schools and the social environment (Kowalski, Giumetti, Schroeder, Lattaner, 2014; Zych, Ortega-Ruiz, Del-Rey, 2015). Negative consequences manifest themselves in many areas, e.g. as social maladjustment, as well as psychological and health problems. Polish research indicates that both being a perpetrator and a victim of online violence contributes to lower levels of life satisfaction (Szuster et al., 2017). Therefore, the adequacy of prevention and intervention measures becomes the key issue (Pyżalski, 2013a).

## Effective prevention conditions

The basic assumption adopted for the project is the belief that undertaking effective prevention activities requires a deeper understanding of the Internet – an important environment in young people's lives.

There is a large overlap between the way young people function online and offline, which means that any prevention efforts need to find a balance between seeing cyberbullying as a new, specific phenomenon, which differs from traditional forms of bullying, and a perspective that perceives it as the proverbial "old

wine in a new bottle", emphasising that nothing has actually changed, "just" the tool used by the perpetrator. At the same time, this overlapping of the two contexts necessitates taking into account the specifics of each of them, which focuses the project on young people's ability to differentiate the specifics of communication or differences between direct and digital contact.

It was deemed prudent to re-orient the project's focus from activities related mainly to risk factors towards taking advantage of the digital context in a positive way (towards pro-development and pro-social activities). This means engaging young people in positive online activities as a protective factor, based on the concept of resilience (Ostaszewski, 2014; Barlińska, Plichta, Pyżalski, Szuster, 2018).

It was also decided that more value should be assigned to the perspective of the addresses of the activities (their satisfaction, needs, and assessment of effectiveness), which should constitute the basis for developing a prevention offer.

Finally, the need to shape and develop universal mechanisms and dispositions impacting the overall functioning of young people (e.g. perspective taking, self-control, understanding of norms, social and communication skills), through both traditional and digital methods of exerting influence, is understood to be of crucial importance.

### Structure of the project

The cooperation resulted in a three-phase project, funded by the National Centre for Research and Development (NCBiR) under the Social Innovations competition, which was implemented in 2015–2019. The project included: a research phase, a pilot phase, and an implementation phase. The latter was implemented by the Empowering Children Foundation and the Praesterno Foundation. Its outputs, in the form of training materials and a handbook for the programme's implementers, can be found on the websites of both foundations. The research phase included: a review of literature and methods, exploratory research (qualitative and quantitative), verification of specific elements of the programme (exercises), and development of a prototype – a ten-hour programme of school lessons. The pilot phase involved testing the programme in 25 schools, developing and conducting teacher training, developing evaluation questionnaires for students and teachers, and conducting the effectiveness assessment (measured twice before and after the programme, and assessments after each lesson).

## RESULTS OF THE RESEARCH PHASE – EMPIRICAL PREMISES FOR APPLICATION SOLUTIONS

The starting point was the analysis and identification of the scale of the phenomenon among Polish lower-secondary school students and the categories of problems which young people consider to be most serious in the area of digital peer relations. We were also interested in young people's subjective perception

of the world, their description of problems in peer relations, experiences with the phenomenon of cyberbullying and their prospects for obtaining support and help.

The aim was to establish empirical premises for designing interventions in the form of lessons. This approach followed an important standard of the Society of Prevention Research (Gottfredson et al., 2015).

The research phase included extensive quantitative (survey method) and qualitative (structured interview method) research. The research participants were students aged 13–16 from 36 lower-secondary schools across Poland (N = 689). The selection of schools was purposive and took into account the following criteria:

- size of the town/city (the sample included schools from larger agglomerations – Warsaw, Łódź, and smaller towns – Łomża, Wieluń, as well as villages, located near Warsaw, Cracow, Poznań, in the vicinity of Łódź and in the region of Subcarpathia);
- part of Poland (centre, south, east);
- type of school (independent lower secondary schools and school complexes).

As a result, it was possible to study schools that differ in terms of their location, the quality of their IT infrastructure, and the local socio-demographic situation: 60% of students attended schools in towns with less than 50,000 inhabitants, and 40% of them – schools located in large cities (over 50,000 inhabitants).

The results of the research phase provided information on the following:

1) the prevalence of cyberbullying: almost all students have come across some form of cyberbullying as witnesses, victims or perpetrators (most often with its milder forms),
2) causes of electronic aggression related to online experiences,
3) perpetrators' motives: unintentionality (impulsive reactions, difficulties with identifying harm done to others), intentionality (e.g. a deliberate ridicule without the awareness of the consequences resulting from antipathy, jealousy, or the prevalence of certain practices),
4) domination of content focused on victimisation (the perspective of the witness and the victim),
5) factors which have potential for victimisation (audience participation, specificity of adolescence),
6) technical diversification of forms of electronic aggression with little diversification of the content of the acts themselves,
7) new forms of aggression resulting from the use of the latest tools, e.g. Snapchat,
8) deficits in cognitive and emotional functioning (self-control and motivation for perspective taking, limited reflexivity, non-internalised norms, as well as sanctioning of norms that allow for aggression),
9) the role of witnesses in the dynamics of cyberbullying acts (disengagement, supporting perpetrators, supporting victims – online and offline),
10) intertwining and evolution of roles in cyberbullying relationships,
11) ineffectiveness of remedial actions: the dominance of interventions over preventive measures, with the prophylactic impacts characterised by punitive approach, the adopted model of action is schematic and reactive rather than preventive, and the informational model dominates,

12) low digital safety culture of students, teachers, and schools,
13) students' expectations regarding prevention often exceed the school and teachers' capabilities; they include a variety of forms, employ both analogue and digital tools, as well as knowledge based on the experiences of students,
14) students look for support of adults,
15) relatively broad scope and content of constructive, pro-social, and supportive activities, the frequency of which decreases with the increasing advancement of the employed on-line tools (Szuster et al. 2017).

The research results indicated that the topics ought to be grouped into four blocks, later used as the focal points of the lessons:

1) online privacy and security – these lessons were prepared by the partner from the Warsaw University of Technology. Their aim was to broaden young people's knowledge of the specificity of digital tools, their limitations, illusory anonymity on the Internet, and effective strategies they can use to protect their own content and share it safely;
2) the phenomenon of electronic aggression: the perpetrator, the witness, and the victim – these lessons were prepared in cooperation with researchers from the Faculty of Psychology and the Institute of Occupational Medicine. Their aim was to show the significance of witnesses of cyberviolence, make people aware of the scope of the phenomenon extending beyond the victim-perpetrator relationship, and teach effective communication;
3) psychological competences supporting positive behaviour on the Internet – these lessons were developed by researchers from the Faculty of Psychology at the University of Warsaw. Their aim was to activate certain competences (perspective taking, empathy, control), showing their social consequences for peer relations, and highlighting their development opportunities;
4) positive use of the Internet – these lessons were prepared by partners from the Institute of Occupational Medicine. Their aim was to broaden and modify the dominant habits, behaviours, and the routine use of the Internet and digital tools in favour of non-stereotypical, developmental and more selective forms of activities (oriented toward others, focused on sharing knowledge and information exchange).

## Activating social competences – the psychological aspect of the project

The core element of our positive prevention approach is strengthening positive behaviour as an alternative to anti-social behaviour by building up social competences. The latter are understood as highly complex skills which allow one to cope with a wide spectrum of interpersonal and group relations, and social situations. The basis of these competences is developmentally conditioned, but their further development is achieved through an intentional process and socialisation.

The selection of the social competences for activation and development within the individual lessons was based on the findings from the research phase

and the knowledge of their preventive potential. All the indicated competences constitute a specific buffer against negative behaviours (also online), and are universal in nature – they are shared by everyone, apply to both *online* and *offline* spaces, and their activation has a developmental and adaptive value. They include self-control, perspective taking (both towards oneself, as self-distancing, as well as towards others), and empathy. The decision to focus on activation of these particular competences was also based on the outcomes from the research phase (a review of prevention programmes, results of our *own quantitative and qualitative research, pilot phases*), as well as the accumulated knowledge on the regulatory role of these competences (e.g. Barlińska, Szuster, Winiewski, 2013, 2015; 2018; Szuster, Barlińska, Kozubal, 2016; Szuster, Wojnarowska, 2016; Barlińska, Plichta, Pyżalski, Szuster, 2018; Mitschel, 2015).

Another reason supporting the need for activation of these competences is the fact that, as indicated by many researchers, they get marginalised as a result of uncontrolled use of digital tools and spending time online. Digital tools and space significantly affect the functioning of the brain by increasing impulsivity, alternating attention, reducing the ability to concentrate, drastically reducing the effectiveness of learning, memory, and reading comprehension (Carr, 2010; Small and Vogen, 2011; Desmurget, 2019). These formal features of brain operations and, consequently of information processing, are manifestations of the marginalisation of those competencies that engage reflexivity and attention. Finally, their common neuronal basis (the pre-frontal cortex) gives rise to the expectation that activation of these structures and regulative consequences will apply to both competences.

The complex, multifaceted and multilevel nature of these competences justifies the expectation that their influence on general social and personal functioning will be global and non-specific. Their regulative consequences concern not only most aspects of social functioning, including building and engaging in peer relationships, but also optimise cognitive functions by stimulating remembering, logical reasoning, anticipatory thinking, as well as cognitive formation of both self-image and images of other people (Szuster, 2019).

The results of targeted research show that empathy and perspective taking reduce aggression, including digital aggression (Barlińska, Szuster, Winiewski 2013, 2015, Szuster, 2019), stereotypical perceptions, egocentric distortions (Szuster, 2018), and facilitates valuing others as individuals (Rutkowska, Szuster, 2011). In turn, self-control deficits contribute to drug use and engaging in risky behaviour (Mischel, 2015). On the other hand, its development promotes perseverance, effective regulation of emotions (Gross, 1989), and strong and stable self-esteem. Ultimately, all these competences are not only developmental in nature (they improve, so to speak, spontaneously with age) but, above all, require careful and systematic development and stimulation. Without this, there is little chance for developing effective self-control (Mischel, 2015) mature and reflective empathy, i.e. the so-called cognitive empathy (Szuster, Jarymowicz, 2020), and perspective taking (Szuster, 2019).

The age of the programme's participants was also an important consideration for choosing the above-listed competences. The developmental specificity of the adolescence period is characterised by secondary egocentrism, impulsiveness,

moral relativism, conformism in relation to a group, a tendency to build social identities mainly on the basis of *online* contacts, and *awareness* of the asymmetry between the digital competences of adults and adolescents (Scheffer, 1998; Barlińska, Szuster, 2014).

As a result, the philosophy underlying the model of projected interactions was determined by dual-process models of functioning (reflexivity versus impulsivity) that best describe most aspects of functioning in the contemporary world (decisions, attitudes, behaviour, and emotions – affective functioning (Kahneman, 2011; Strack, Deutsch, 2014; Petty, Brinol, 2014; Ginger, 2018; Ginger, Jarymowicz, 2011).

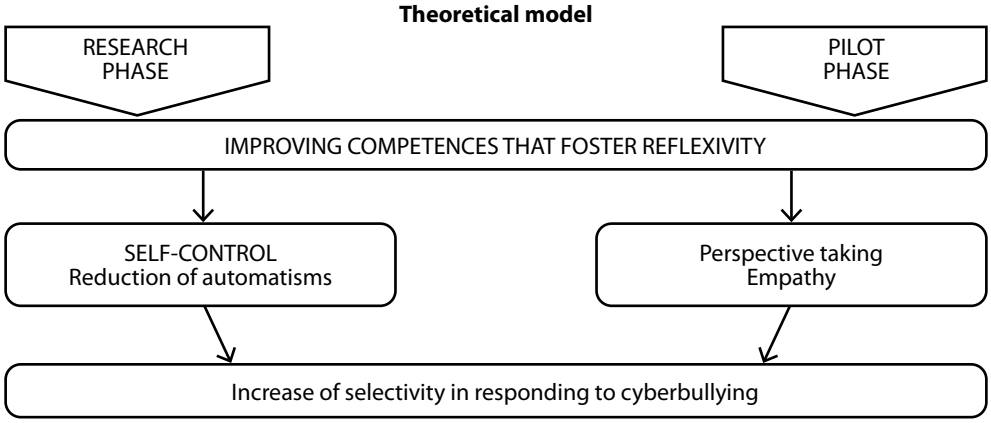


**Fig. 1.** Model predicting the impact of activated competences on reduction of peer violence

## Examples of operationalisation – a series of lessons aimed at activating psychological competences

One of the four thematic blocks, the one focusing on activation of psychological competences supporting positive on-line behaviour, was entirely designed by a team of researchers from the Faculty of Psychology of the University of Warsaw. As the competences to be activated (perspective taking, empathy and self-control) are specifically human, a figure of a robot was chosen as a clear counterpoint, and, at the same time, a good illustration of the phenomena constituting the subject of the lesson. The reference to the robot was used to introduce the concept of automatisms, initiate a discussion about the meaning of automatism, control, and reflection, conduct exercises highlighting the universality of automatisms in human functions, both in physical and virtual spaces, and show how unconscious reactions may affect the way people act and communicate with others.

Another aim of the lesson was to encourage the development of strategies which can bring the "robot" under control or at least limit its influence by

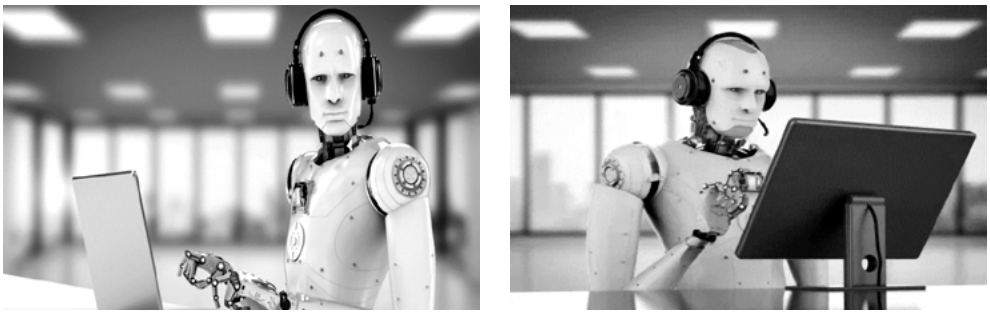

**Fig. 2.** An example of an illustration taken from the IMPACT educational materials

activating the function of self-control. Identification of differences between humans and mindless automatons evoked the phenomena of emotions, empathy and perspective taking. By placing the robot figure in the context of communication, the materials draw attention to the features and possible consequences of "automatic" communication, which dominates online relationships and determines the specificity of online communication.

Separate lessons were devoted to the role of witnesses to cyberbullying and the importance of knowing the specific features of online communication.

## Innovative methods of shaping and activating competences

Getting students to really engage with the material and making the lessons easy to implement for teachers are important prerequisites for the effectiveness of the programme. Thus, simplicity of content and language, varied forms of activities, attractiveness of materials and solutions, dynamic character and focus on "short forms" became key requirements for planning the content of the lessons. Consequently, the developed materials incorporated varied types of activities, which included:

- demonstrations (e.g. presentation of a diagram of the brain and the areas responsible for self-control, films containing real examples of negative online behaviour, photos showing expressions of emotions),
- identification and matching (e.g. expressions of primary and secondary emotions, phenomena specific to online communication, such as a cockpit effect, anonymity, constant accessibility, unlimited audience),
- short tasks, exercises resembling mini experiments (e.g., estimating the time needed for the performance a task when the solution is given and confronting this with the actual time needed to complete the task – as a prelude to activating perspective taking),
- identifying and consequently becoming aware of one's own habits/ automatisms (e.g. identifying automatisms in a story),
- discussions (e.g. as an introduction to the lesson or as part of conclusions, after the exercise),

– simulations of online situations – anticipated reactions of protagonists of the presented situations,
– few short homework assignments.

The above-described activities were carried out both online and off-line.

## EVALUATION OF THE PROJECT

The evaluation of the project was based on a survey (repeated measures) which was completed by students twice – before and after all lessons. It contained questions concerning the students' assessment of their own competences, i.e.: understanding oneself, as well as one's needs and emotions, understanding others, an ability to make friends, an ability to protect one's privacy online and defend oneself against attacks, resolving conflicts with peers, planning one's spending, coping with upsetting emotions, an ability to control one's behaviour, and refraining from hurting others online. The assessments used a 5-point scale, where 0 indicated no competence in the given area and 5 meant a high level of competence. The indicator of the project's effectiveness was defined as the difference between the initial and final measurement.

A total of n = 552 participants took part in the project's evaluation at both stages, of which n = 243 were boys, n = 309 girls, and no data on gender was collected in n = 13 of cases.

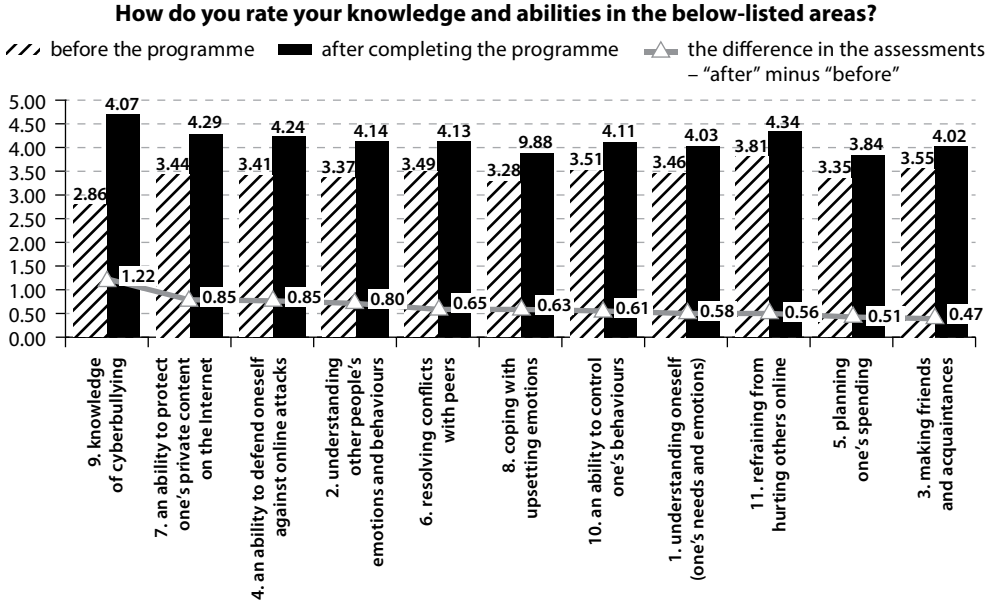


**Fig. 3.** The average assessment scores for competences evaluated before and after the IMPACT programme and the differences between the measurements

As presented in Figure 3, it was established (using Student's t-test) that for each of the competences measured there was a statistically significant increase of p.i. < 0.001. The values of the Student's t-test statistics for individual comparisons are as follows: understanding oneself t = 12.606; understanding other people's emotions and behaviours t = 16.474; making friends and acquaintances t = 10.273, ability to defend oneself against online attacks t = 15.486; planning one's spending t = 15.486, resolving conflicts with peers t = 13.130; an ability to protect one's private content on the Internet t = 16.505; coping with upsetting emotions t = 13.363; knowledge of cyberbullying t = 20.472; an ability to control one's own behaviour t = 12.762; refraining from hurting others online t = 11.473. The greatest competence gains were observed in the areas of knowledge about cyberbullying, protecting one's privacy and defending oneself from online attacks, but also in understanding other people's emotions and behaviour. Irrespective of the size of the (significant) increase in digital and social competences, the results of the evaluation indicate that the project is effective precisely in the scope of these skills which constitute a buffer against peer violence, both online and offline.

The second measure used to evaluate the project was based on the assessments which students' and teachers' made immediately after each lesson. Students assessed whether they liked or disliked a particular lesson, while teachers evaluated whether the lesson had achieved its goals. The percentage of students who liked the lessons and the percentage of teachers who felt that the lessons met their objectives were used as the indicators.

As seen above, the percentage of teachers who reported that they though the programme archived its objectives (100–74%) was higher than the percentage

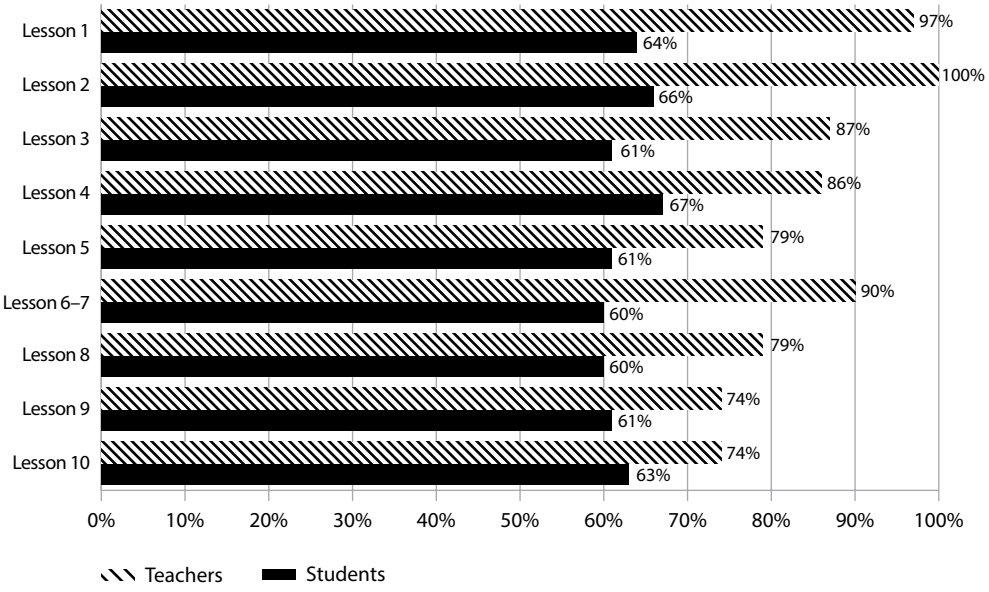


**Fig. 4.** Percentage of teachers and students whose assessment of the lessons was positive

of students who said they enjoyed the lessons (67–60%). This asymmetry between the positive assessments of teachers and students may be the result of attribution distortions – a self-serving bias (Miller, Ross, 1975). Teachers, as implementers of the lessons, tended to give more positive evaluations of their own activity (self-enhancement) than students who were recipients of individual lessons. Furthermore, the proportion of students who were satisfied with the individual lessons showed less variety than the percentages of teachers who felt positive about the achieved objectives. This may indicate, on the one hand, that the teachers were more selective in their assessments and, on the other hand, that the attitude of the students who were dissatisfied with their participation in the programme was sceptical and hard to change in general.

Lessons 2, 3, 4, 5 constitute the psychological module which achieved its objectives in the opinion of the highest percentage of teachers.

The last element of the evaluation was the qualitative assessment made by the students. They described the scope of changes which they noticed in their functioning as a result of participation in the programme. On average, students mentioned 2 important changes which occurred as a result of their participation in the programme. These included:

- gaining more knowledge ("*I learned about 116111*"; "*I know what a cookie is*"; "*I know what Java Script is*"),
- changes in perception and reactions (*"I know that sometimes it is better not to write a comment than to write something unpleasant"; "My way of looking at online hate has changed"; "I'm now more careful online"; "I saw how few people are active online in a creative way"; "I am now more understanding"),*
- acquiring competences:
  - self-control ("*I am now capable of greater self-control*", "*I use self-control*")
  - restrain ("*I began to hold myself back from unnecessary temptations*"),
  - increased mindfulness and selectiveness ("*I will be careful online*",
  - "I will be more careful online"),
  - reducing the use of automatisms ("*I've learned to plan my spending*",
  - *"I try to control my behaviour"*, *"I don't use my phone at school"),*
  - coping with negative behaviours occurring in the environment and among peers ("*I learned to defend myself against online attacks*", "*I have more self-defence skills*", "*I know how to deal with hate*"),
  - noticing and recognising their own and others' emotions, and regulating emotions ("*I learned to notice what emotions others experience when I laugh at them*", "*I understand that someone may feel sad because of my messages*", "*I learned to control my anger*", "*I stay calm*", *"I learnt how to deal with emotions", "more sensitivity", "understanding of myself and others*").

To sum up, the evaluation process included a variety of indicators: the average measurement of the increase in the level of competences after the programme, the percentage of the programme implementers who thought that individual lessons met their objectives, and the percentage of students who enjoyed

the individual lessons. These quantitative measures generally indicate that both teachers and students perceive the programme in a positive way. The student's qualitative assessments provide more information. Taking into account the difficulties with formulating answers to open-ended questions (which we experienced during the interviews), the varied level of schools, and the fact that the period of adolescence is characterised by limited self-distancing and self-reflection competences, the fact that students named on average two elements which changed under the influence of the intervention *indicates that* the change was subjectively felt, identified and adequately verbalised. The changes reported by the students concerned the areas targeted by the programme.

## OUTPUTS OF THE IMPACT PROJECT

The lasting outputs of our programme are: 10 lesson plans (including 4 psychological), a handbook for the programme's implementers, a series of 7 multimedia presentations, a series of 6 educational films, 2 mobile applications for interactive exercises, an IT platform, an e-learning course for teachers, and scientific publications.

The e-learning course for teachers allows for comprehensive preparation for running the IMPACT programme with a class. IMPACT is licensed under the Creative Commons Attribution – NonCommercial – NoDerivatives 4.0 International license (CC BY-NC-ND 4.0) This licence allows for the programme to be distributed, presented and performed only for non-commercial purposes and on the condition that it is preserved in its original form (i.e. that no derivative works are created on its basis)[3].

## PROS AND CONS OF INTERDISCIPLINARY PROGRAMMES – IN LIEU OF A CONCLUSION

The interdisciplinary nature of the programme undoubtedly provided it with the advantage of dealing with the issue of reducing peer violence with the help of multiple varied approaches. Different perspectives of the practitioners (technological, pedagogical, psychological and implementation perspectives) significantly enriched the programme.

However, this interdisciplinary character would not have been achieved, if the project's partners were not able to overcome the barriers related to differences concerning their scientific languages, conceptual apparatuses of individual

[3] The project's outputs are available on the websites of the two foundations which implemented the project: https://www.praesterno.pl/programy-biezace/cyberprzemoc/; and https://impact.fdds.pl/.

methodologies, and ways of formulating questions, as well as the issue of justification of using indirect measurements. Metaphorically speaking, the project's partners had to move from the Tower of Babel to the Round Table. The need to develop synergy was a burden in the first phase of the programme, but it constituted an added value in the later stages of its implementation.

An additional, situational, burden for the implementation of the project (mainly for non-governmental organisations) was the educational system reform which resulted in the closure of lower-secondary schools. This change resulted in the necessity to adapt the programme, which was already being implemented, to the changes in various aspects.

The experience gained from the implementation of the IMPACT programme confirms the usefulness of incorporating the issue of bullying and cyberbullying prevention into the everyday functioning of schools (rather than through one-off special activities). The objective is to strike the balance between reactive (responding to current events, such as an act of cyberbullying) and proactive efforts. In the opinion of the project's authors, IMPACT is a programme provides tools that respond to this very need.

## REFERENCES

Barlińska, J., Plichta, P., Pyżalski, J., Szuster, A. (2018). Ich słowami obraz pomocy w sytuacjach cyberprzemocy rówieśniczej z perspektywy uczniów. *Dziecko Krzywdzone. Teoria badania i praktyka*, *17*(4), s. 82–115.

Barlińska, J., Szuster, A. (2011). Cyberprzemoc – o starym zjawisku agresji w nowoczesnej przestrzeni internetu. W: J. Czarnota-Bojarska, I. Zinserling (red.), *W kręgu psychologii społecznej* (s. 222–238). Warszawa: Wydawnictwo Uniwersytetu Warszawskiego.

Barlińska, J., Szuster, A. (2014). *Cyberprzemoc. O zagrożeniach i szansach na ograniczenie zjawiska wśród adolescentów*. Warszawa: Wydawnictwo Uniwersytetu Warszawskiego.

Barlińska, J., Szuster, A., Winiewski, M. (2013). Cyberbullying among Adolescent Bystanders: Role of the Communication Medium, Form of Violence, and Empathy. *Journal of Community & Applied Social Psychology, 23*, 37–51.

Barlińska, J., Szuster, A., Winiewski, M. (2015). The role of short- and long-term cognitive empathy activation in preventing cyberbystander reinforcing cyberbullying behaviour. *Cyberpsychology, Behavior, and Social Networking*. DOI: 10.1089/cyber.2014.0412.

Barlińska, J., Szuster, A., Winiewski, M. (2018). Cyberbullying Among Adolescent Bystanders: Role of Affective Versus Cognitive Empathy in Increasing Prosocial Cyberbystander Behavior. *Frontiers in Psychology*. DOI: 10.3389/fpsyg.2018.00799.

Carr, N. (2010). *The Shallows: What the Internet Is Doing to Our Brains*. N.Y., London: W. W. Norton & Company.

Desmurget, M. (2019). *La Fabrique du crétin digital. Les dangers des ecranes pour nos enfants*. Paris: Seuil.

Fletcher, A., Fitzgerald, Yau, N., Jones, R., Allen, E., Viner, R. M., Bonell, C. (2014). Brief report: Cyberbullying perpetration and its associations with socio-demographics, aggressive behaviour at school, and mental health outcomes. *J. of Adolescence*, *37*(8), 1393–1398. DOI: 10.1016/j.adolescence.2014.10.005.

Gottfredson, D. C., Cook, T. D., Gardner, E. F., Gorman-Smith, D., Howe, G. W., Sandler, N., Zafft, K. M. (2015). Standards of Evidence for Efficacy, Effectiveness, and Scaleup. Research in Prevention Science: Next Generation. *Prevention Science, 16*(7), 893– 926 DOI: 10.1007/s11121-015-555-x.

Gross, J. (1998). The emerging field of emotion regulation: an integrative review. *Review of General Psychology, 2*, 271–299.

Imbir, K. (2018). *Dwa systemy emocji i ich konsekwencje dla procesów poznawczych*. Warszawa: Wydawnictwa Uniwersytetu Warszawskiego.

Imbir, K., Jarymowicz, M. (2011). Wzbudzanie emocji o genezie automatycznej bądź refleksyjnej a przejawy efektywności kontroli uwagi w Teście Antysakkad. *Psychologia-Etologia-Genetyka*, (23), 9–28.

Kahneman, D. K. (2011). *Thinking, fast and slow*. New York: Farrar, Straus and Giroux.

Kowalski, R. M., Giumetti, G. W., Schroeder, A. N., Lattaner, M. R. (2014). Bullying in the digital age: a critical review and meta-analysis of cyberbullying research among youth. *Psychol. Bull. 140*, 1073–1137. DOI: 10.1037/a0035618.

Miller, D.T., Ross, M. (1975).Self-serving biases in the attribution of causality: Fact or fiction? *Psychological Bulletin, 82*, s. 213–225.

Mischel, W. (2015). *Test Marshmalow o pożytkach płynących z samokontroli*. Sopot: Smak Słowa.

NIK. (2017). *Zapobieganie i przeciwdziałanie cyberprzemocy wśród dzieci i młodzieży. Informacja o wynikach kontroli*. Warszawa: Najwyższa Izba Kontroli.

Ostaszewski, K. (2014). *Zachowania ryzykowne młodzieży w perspektywie mechanizmów resilience*. Warszawa: Instytut Psychiatrii i Neurologii.

Petty, R. E., Brinol, P. (2014). The Elaboration Likelihood and Metacognitive Models of Attitudes Implications for Prejudice the Self and Beyond. W: J. W. Sherman, B. Gawronski, Y. Trope (red.), *Dual-process theories of the social mind* (s. 172–187). New York: Guilford Press.

Pyżalski, J. (2012). *Agresja elektroniczna i cyberbullying jako nowe ryzykowne zachowania młodzieży*. Kraków: Oficyna Wydawnicza Impuls.

Pyżalski, J. (2013a). Rodzina i szkoła a przeciwdziałanie zaangażowaniu młodych ludzi w ryzykowne zachowania online. *Dziecko Krzywdzone. Teoria, badania, praktyka, 12*(1), 99–109.

Pyżalski, J. (2013b). Beyond peer cyberbullying – involvement of Polish adolescents in different kinds of electronic aggression. *Studia Edukacyjne, 28*, 147–168.

Pyżalski, J. (2014). Elektroniczna agresja rówieśnicza – ustalenia empiryczne ostatniej dekady. W: J. Jarczyńska (red.), *Uzależnienia behawioralne i zachowania problemowe młodzieży* (s. 33–47). Bydgoszcz: Wydawnictwo Uniwersytetu Kazimierza Wielkiego.

Rutkowska, D., Szuster,A. (2011). Choosing an interaction partner: The role of representations of other people and coding systems in the preference pattern for selection criteria. *Studia Psychologica 53*, 2, 185–199.

Schaffer, H. R. (1996). *Social Development.* Oxford: Blackwell Published.

Small, G., Vogan, G. (2011). *I-Mózg. Jak przetrwać technologiczną przemianę współczesnej umysłowości*. Poznań: Vesper.

Smith, P. K., (2016). Bullying: Definition, Types, Causes, Consequences and Intervention. *Social and Personality Psychology Compass*, *10*(9), 519–532. DOI: 10.1111/spc3.12266.

Strack, F., Deutsch, R. (2014). The Reflective-impulsive Model. W: W. Sherman, B. Gawronski, Y. Trope (red.), *Dual-Procesess Theories of the Social Mind* (s. 92–104). New York, NY: Guilford Press.

Szuster, A. (2018). Self- vs. Other-Focused Altruism: Studies on Endocentric and Exocentric Prosocial Orientations. *Polish Psychological Bulletin*, vol. 49(2), 240–250, DOI: 10.24425/119492.

Szuster, A. (2019). *Z drugiej strony góry. Oczekiwane i nieoczekiwane następstwa przyjmowania perspektywy innej osoby*. Warszawa: Wydawnictwo Naukowe Scholar.

Szuster, A., Barlińska, J., Kozubal, M. (2016). In seaarch of a Simple Method. Is Human Face an Effective and Automatic Filter Inhibiting Cyberbulling? [in:] M. F. Wright (Ed.), *A social-ecological approach to cyberbullying*. Hauppauge NY: Nova Publishing. (pp. 379–402). ISBN: 978–1–63483–755–2.

Szuster, A., Barlińska, J., Plichta, P., Pyżalski, J., Wójcik, S., Kowalewicz, T. (2017). *Raport z realizacji zadania nr 2 „Metodologia ewaluacji ćwiczeń i narzędzi"*. Niepublikowany raport z realizacji programu IMPACT – Interdyscyplinarny Model Przeciwdziałania Agresji i Cyberprzemocy Technologicznej finansowanego ze środków NCBiR Innowacje Społeczne.

Szuster, A., Jarymowicz, M. (2020). Human empathy of automatic vs. reflective origin: Diverse attributes and regulative consequences. *New Ideas in Psychology*, v. 56, DOI: 10.1016/j.newideapsych.2019.100748.

Szuster, A., Wojnarowska, A. (2016). The Influence of Mimicry on the Rediction of Infra-Humanization. *Frontiers in Psychology*, DOI: 10.3389/fpsyg.2016.00975.

Tokunaga, R. S. (2010). Following you home from school: A critical review and synthesis of research on cyberbullying victimization. *Computers in Human Behavior*, *26*, 277–287.

Zych, I., Ortega-Ruiz, R., and DelRey, R.(2015). Systematic review of theoretical studies on bullying and cyberbullying: facts, knowledge, prevention and intervention. *Aggressive Violent Behaviour*, *23*, 1–21. DOI: 10.1016/j.avb.2015.10.001.