



How are teachers being attacked online? On cyberbullying and cyberaggression that targets school educators from the student's perspective

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ABSTRACT

The twin phenomena of cyberbullying and cyberaggression are among the most common e-threats. Today, much is known about the aggression and violence mediated by new media and targeted at students. However, there is still an empirical gap in the consideration of the mechanisms and forms of cyberaggression and cyberbullying targeting teachers. The aim of this study is to present 10 types of cyber-attacks that teachers have been subjected to in Poland in the last few years. The types of attacks presented include vilification in the information space (forums and social networking sites), direct attack using social networks, recording teachers without their consent, online blackmail, creation and dissemination of memes, photomontage, latent cyberbullying, destructive actions in the COVID-19 period, the creation of fake profiles, and the use of a digital tool in an offline environment. The subject of the study was the statements of post-secondary school graduates who had encountered such phenomena. The article highlights the need to increase digital safety for teachers.

Keywords: teacher, cyberbullying, cyberaggression, students, school, attack on teacher, Poland

INTRODUCTION

Cyberbullying and cyberaggression are currently among the most frequently analyzed e-threats in media pedagogy (González Calatayud et al., 2016; Pyżalski et al., 2022). Among the different types of problematic situations mediated by new media, there are several qualitative (Dennehy et al., 2020) and quantitative research findings (González Calatayud et al., 2016; Kopecký, 2016; Pyżalski et al., 2019) as well as meta-analyses (Chun et al., 2020) that demonstrate the scale and mechanisms of harm inflicted through information and communication technologies (ICTs). Currently, representatives of the risk paradigm of media pedagogy (Tomczyk, 2021) are conducting much research in the field of cyberbullying and cyberaggression not only to understand the phenomena, but also to create preventive programs to combat such problems (González Sodis & Leiva Olivencia, 2023; Siddiqui & Schultze-Krumbholz, 2023; Torgal et al., 2023). However, most of the

research in this area has focused on the children and adolescents who are at particular risk (Marín-López & Zych, 2024; Zych & Llorent, 2023). Taking into account the specific nature of the developmental period, the youngest group of Internet users is subject to a special type of care by researchers, educators, parents, and educational policy-makers, who aim to protect this group from negative phenomena such as hate speech, 'hejt', happy slapping, exposure to vulgarities, verbal attacks from other users, identity theft, dissemination of false and inaccurate information, and others. Research in this area has a long-standing tradition and is characterized by increasing educational and didactic effectiveness (Lim et al., 2022; Rodríguez-Álvarez et al., 2018).

Although research on the scale and mechanisms of cyberbullying and cyberaggression has a long tradition in Polish and foreign media pedagogy (Leung, 2024; Rębisz et al., 2023), there is a key group in the perspective of the school ecosystem that is under-diagnosed in the context of both phenomena. Teachers, due to their undisputed key position, play a significant role in dealing with cyberbullying and cyberaggression at school (Hou, 2023). The implementation of both first-level prevention and crisis resolution tasks are assigned to this group (González Sodis & Leiva Olivencia, 2022; Sadeli et al., 2023). However, the currently available literature on the subject does not provide sufficient data or solutions for the digital safety of teachers (Bisaillon et al., 2023), who may themselves become targets of cyberbullying and cyberaggression. The literature on the subject (Arantes, 2023; Rajbhandari & Rana, 2023) provides fragmentary data on the characteristics of attacks targeting educators in a residual manner (with these being territorially limited and, in most cases, out of date).

The perceived crisis of teacher recognition (Adams & Tulasiewicz, 2005; Rajchel, 2017), as well as the treatment of teachers as a self-serving group in the context of digital safety, results in a clear empirical gap in understanding the contemporary forms and mechanisms related to cyberbullying and cyberaggression targeting this group. These topics, due to the lack of extensive literature on the subject, can be classified not only as an empirical gap, but also as a taboo area. This study is an attempt to understand the phenomenon of cyberbullying and cyberaggression targeting teachers from the perspective of the experiences of secondary school graduates in Poland. The article thus contributes to the discussion on the digital safety of the entire school ecosystem, thus completing the typology of cyberbullying and cyberaggression that teachers may encounter not only as educators, but as the recipients of these actions. The article is part of an addition to the research on electronic aggression, cyberbullying, which has so far been focused mainly on students. The article is also an attempt to draw attention to the need to strengthen the digital safety of teachers in Poland. The attempt to diagnose the phenomenon fills an empirical gap and may contribute to the improvement of preventive measures aimed at strengthening digital competences related to self-protection in cyberspace.

Research Overview

It is evident that in recent years, an increasing number of victims of cyberbullying have been teachers. This phenomenon leads us to reflect on how, over time, there has been a transformation in the boundaries of the relationship between the educative figure and their students, starting from the relationship between parent and child, to the relationship between teacher and pupil. Over time, there has been a decreasing authority and rigidity in the methods and modalities used by educational figures; while on the one hand this has led to a facilitation of dialogue and relationships, on the other hand it has led to an increasing lack of respect mainly towards adults on the part of younger people. The global spread of the phenomenon, as the data show us, leads us to worry about the growing climate of online hatred towards teachers as a reflection of a lack of respect and those healthy boundaries that constitute the educational pact between all the figures involved.

In the case of teachers, the lack of respect is often additionally due to the meddling of parental figures in defense of their children and against teachers and the educational institution. We observe a radical transformation in the way students can overcome teacher authority using new media (Kyriacou & Zuin, 2016) of which the rapid proliferation of novel channels of online communication is a major part. This has led to a further change in the generational exchange, which is often difficult to manage.

In today's hyper-technological society, characterized by the ever-increasing possibility of uninterrupted connectivity, everyone is constantly exposed to the use of new media, which is used for self-expression and to relate to others. The lack of adequate preparation for the appropriate use of these tools exposes their users to considerable risks: interpersonal relationships are distorted to such an extent that the virtual dimension often has the same value as the real one. A direct consequence of this is the growth, in recent

years, of episodes of cyberbullying that have had and continue to have significant repercussions on the individual well-being of individuals. The impact of cyberbullying on the victim is physical, emotional, and behavioral. Cyberbullying at work also has an impact on well-being and on performance (Celuch et al., 2022). In the case of cyberbullying against teachers the effects are felt across the entire school system and have repercussions on the entire educational and learning system with subsequent negative consequences for the individual and the organization (Tomczyk, 2020) also as result of disempowerment, according to disempowerment theory (Celuch et al., 2022; Kane & Montgomery, 1998). Disempowerment can cause different negative effects on attitudes and behaviors, impairing the functioning of the individual in the organization in many ways, including hindering their emotional engagement in their work, organizational commitment, motivation, cooperation, innovation efforts, and trust in their employer and colleagues (Kane & Montgomery, 1998). Other studies link disempowerment theory to cyberbullying at work because of a violation of the dignity of the individual (Celuch et al., 2022).

In general, society is increasingly involved in a moral change founded on a general moral disengagement. The literature underlines the link between Bandura's theory of moral disengagement and aggressive behavior (Gini et al., 2014). Many studies show that moral disengagement, associated with a lack of empathy and an incorrect representation of the victim's experience could be predictors of cyberbullying (Agus et al., 2021). All these aspects contribute to the diffusion of the phenomenon of cyberbullying and cyberaggression against teachers.

Teacher-focused research on cyberbullying and cyberaggression has become a subject of interest both to understand what the triggers may be and to try to find solutions that can be effective from the perspective of both prevention and intervention.

The growing reports of cyberbullying focused on teachers are confirmed and demonstrated by researchers from all parts of the world (Ben-Hayun & Zysberg, 2023; Kopecký & Szotkowski, 2017; Zinter et al., 2024).

As is widely documented in the literature, the activation of preventive programs can prevent the creation of the conditions that lead to suffering and victimization in all contexts of life, including in the school context. The interventions that can be proposed, and which have already proven effective in other contexts, are those promoting empathy and emotional intelligence, which maintain, particularly in the long term, adaptive behaviors (Agus et al., 2021; Balakrishnan et al., 2019). In the school context, a direct link between the promotion of empathy and the reduction of cyberbullying has proven to be more effective, where the intervention was conducted by experts in pedagogy and psychology, not on a specific target group but on the entire class group. The implementation of such programs has also shown significant effects on the level of respect towards all the educational figures involved, promoting educational and digital education behaviors not only among students but also among parents.

It has become of fundamental importance to promote digital competences among teachers (Cataudella et al., 2021; Tomczyk et al., 2023) but it is important to promote digital wellbeing, digital safety behaviors, and a safe digital environment by implementing different forms, methods, and didactic measures into the formal and informal curricula, from the very initial stages of education (Tomczyk, 2020).

RESEARCH METHODOLOGY

Aim & Subject of Study

The aim of this article is to create a typology of behaviors classified as cyberbullying and cyberaggression targeting teachers. The indirect aim is to show the mechanisms of attacks carried out in cyberspace against educators from the perspective of the experiences of high school graduates. Thus, the article answers the research problem—what forms of cyberaggression and cyberbullying have been observed by former secondary/high school students from the perspective of their own experiences? The subject of the study is the students' statements (their biographical experiences) and therefore their memory of situations related to the research objective. The study responds to the need not only to add to the knowledge of risky behavior in the school ecosystem, but also to raise awareness of the dangers of the digital world to which all members of school communities are exposed. The text is also part of the discussion on issues that are considered taboo,

where teachers are those who are highly digitally competent and at the same time perfectly capable of dealing with all the risks of the digital world resulting from their professional work (Tomczyk, 2020). In other words, the article fills an important gap in media pedagogy assigned to the risk paradigm.

Survey Procedure & Survey Instrument

Due to the research problems posed in relation to current forms of cyberbullying and cyberaggression targeting teachers, a qualitative research model was adopted. This form of research allows for a fresh look at the existing knowledge of risk behaviors occurring in the school system. Qualitative research provides an opportunity to change-to add to the existing knowledge related to cyberbullying, which is undergoing dynamic transformations due to the specificity of the development of e-services, or more broadly the changes of the information society (Ziemba, 2018). Qualitative research also responds to the need to know more precisely not the scale of the phenomenon, but the specifics of the given risk behaviors involving both students and teachers, i.e., the main actors in the school ecosystem.

The choice of qualitative research necessitated the use of a standardized interview consisting of a single open-ended question, the purpose of which was to obtain information from students on the forms and courses of attack perpetrated against teachers in and out of school due to their profession. Thirty-two high school graduates participated in the study and were selected due to meeting the following requirements: they graduated from high school no more than three years prior to the interview, they agreed to participate in the study, and they had knowledge of cyberbullying and cyberaggression that occurred during their time at school. Participation in the study was voluntary. Some of the graduates were recruited through purposive selection (students majoring in pedagogy), while others were recruited through snowball selection (Naderifar et al., 2017). Originally, 38 graduate students were recruited to answer questions related to the forms and courses of attack on teachers. Of the 38 responses, 32 were qualified for analysis due to the compatibility of the collected material with the purpose of the study. The responses were analyzed sentence by sentence and then, due to the specific nature of the described attack, assigned to a category. In the absence of a category (a unique form of attack), the statement formed the basis for the creation of a new category. At the same time, issues relating to validity and reliability were considered in this research process. In accordance with the assumptions made (Golafshani, 2003; Leung, 2015), validity was determined at the stage of data analysis, and thus on the inclusion of only those responses that related to digital attacks on teachers. Statements not directly related to the purpose of the research were disregarded during the data analysis. Reliability, in turn, was checked by external cross-validation of the categories presented by two independent experts. Each of these experts specializes in research on the phenomena of cyberbullying and cyberaggression. The external experts determined the validity of the extracted categories in relation to the respondents' statements. The reliability checks in this case concerned the logic of the extracted categories.

Considering the dynamics of the phenomena occurring in the information society, solutions existing in grounded theory (Cutcliffe, 2000) were applied to create new typologies of Internet mediated risk behavior or to supplement existing forms. Based on available statements, 10 different forms of aggression and violence targeting teachers using ICT were generated. A schematic of the research procedure is presented in [Figure 1](#).

Research Ethics

During data collection, no information was collected to identify the interviewees. The research collected only basic socio-demographic data such as age and gender—due to the sampling criterion. Participation in the survey was characterized by voluntariness. While responding, the respondents were free to opt out at any time. In addition, those responding were informed about how the data would be processed, the purpose of the research, and the funding agency for the research (National Agency for Academic Exchange—Bekker Project, national component).

FINDINGS

Based on the analysis and categorization of the responses, ten forms of cyber-attacks targeting teachers were identified. Among the categories of cyberbullying and cyberaggression witnessed, an attack aimed at misleading readers about the teacher (e.g., their competence or behavior) can be distinguished.

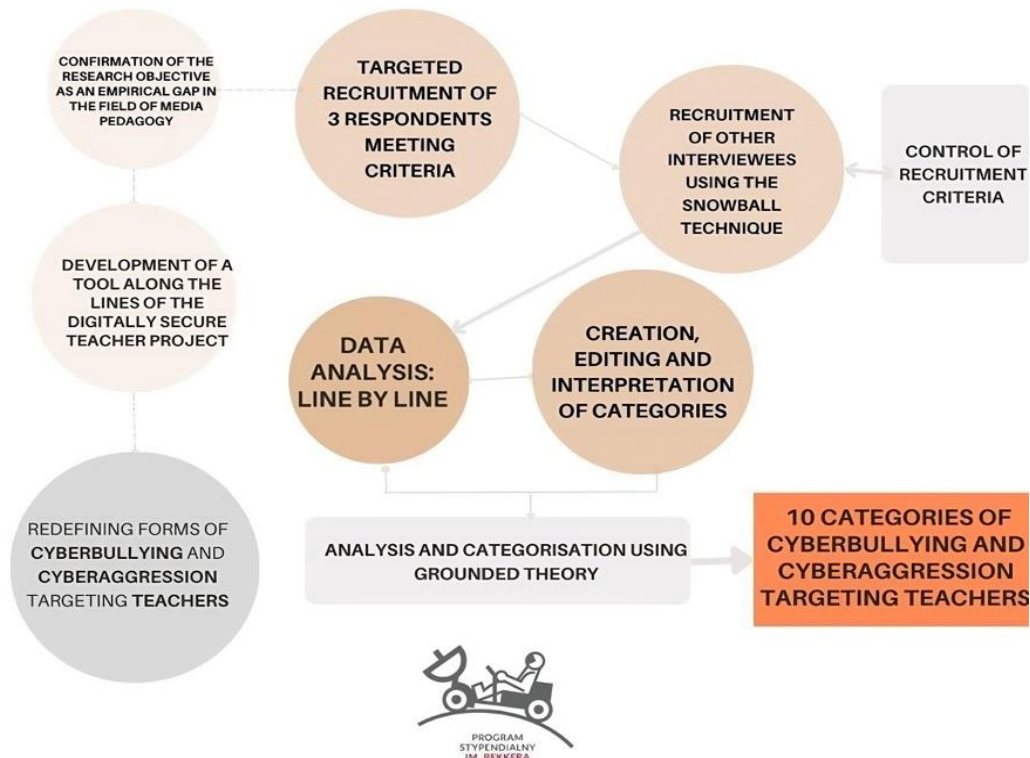


Figure 1. Research procedure (Source: Authors)

Among the attacks, a category also emerged related to direct attacks on the teacher most often by means of social networking sites (SNSs). Among the types of attacks, one can also distinguish the archiving of the teacher’s image without consent (recording videos or taking photographs). This category is complemented by another behavior related to creating and sharing the teacher’s image in the form of memes. A category like the previous ones and concerning the image is the creation of photomontages using the teacher’s face. Among the activities that break the boundaries of the law is online blackmail aimed at obtaining various types of personal advantage for the students. Among the atypical forms of cyberbullying, the respondents also highlighted covert forms of cyberbullying that were intended to discredit the teacher and were limited to a select group of students. One type of attack sought to disrupt the teaching process during crisis e-learning, which was particularly resonant and a form of cyberbullying and cyberaggression in the school environment that did not occur before 2020. The penultimate category was related to the creation of fake teacher profiles on various e-services (e.g., social networks and dating sites) and their subsequent promotion to students. The last category concerned the use of digital tools in an offline environment intended, by design, to provoke negative reactions on the part of the attacker. All the categories identified are presented in **Figure 2** and discussed in detail in the empirical section.

Defamation on an Internet Forum

One of the frequently mentioned forms of aggression directed at teachers is their description in a negative light. Such posts usually appear in places that are public. According to R3, in selected situations teachers are attacked not only by students but also by parents.

“One teacher was constantly insulted on a certain online forum. The negative comments came from both students and their parents. The matter was reported to the police and the denigrating posts were removed” (R3, F).

The situation of attacking a teacher by posting various types of opinions may relate not only to professional issues, but also to actual or alleged controversial situations in society. Such actions are most often aimed at discrediting the teacher in question due to personal preferences, such as political choices or the issue of religion.



Figure 2. Forms of cyberaggression & cyberbullying targeting teachers (Source: Authors)

“There were unfavorable comments in the comments on the local portal about one of the teachers. They were related to his political beliefs, which supposedly influenced the content he introduced during lessons. He was accused of an unprofessional approach, anonymously of course. The teacher did not take any action, but this had a negative impact on his mental condition” (R7, M).

Among the different situations related to the vilification of teachers in the online space, different reasons emerge as to why students are motivated to engage in this type of behavior. The reason for the cyberbullying of a teacher may be a desire for revenge, following processes in the school environment. An example of such a situation is the story presented by R8 in which female students triggered actions to denigrate certain teachers due to what the students deemed the unsatisfactory way in which the students were evaluated or graded by the teacher. In this case, the aftermath of the cyberbullying was not only the deletion of the posts generated by the students, but also the arrangement of consultations with the parents of the students. The situation presented below clearly demonstrates that content posted on the Internet is identifiable in terms of authorship. Such an action means that teachers, due to the characteristics of cyberspace, also have tools that can potentially protect them.

“When I went to middle school two female students did not learn well in mathematics, so the teacher did not give them good grades. This caused them to start writing different information about him on the internet thinking that it would not get back to him. They ridiculed him on the website and called him names. When the teacher found out about this and reported the matter to the head office, the students suffered the consequences of their actions, which also translated into a reduction in their behavior grade. They also had to delete everything they had written on the Internet about the teacher and apologize to him. The headmistress also notified the parents of the students who had committed such behavior on the Internet about the whole matter” (R8, F).

Situations involving the posting of false information can escalate into other types of attacks. An example of several levels of cyberbullying can be seen in the story presented by R14, where cyberbullying can turn into physical aggression.

“The mathematics teacher was insulted and denigrated in various forums by the students of the school. This escalated into blackmail and verbal aggression by his students, which later escalated into physical aggression. The consequences were that the perpetrators were expelled from the school and the teacher changed jobs” (R14, F).

Attacking teachers on the Internet in the form of spreading false information is primarily linked to damage to one’s image. Such actions can lead not only to a temporary uncomfortable feeling among the attacked but can also have the effect of negating the professionalism and ethics of the person concerned. The situation mentioned by R15 resulted in many cases of false information being posted, at the same time forcing the need to correct the situations in question by, among other things, removing the false information.

“At my school, a teacher was once attacked over the Internet. The attack concerned the spreading of untrue information about him, which touched his private sphere and harmed his good name. The slander that the perpetrator made could have damaged his reputation and led to serious consequences” (R15, F).

Malicious and untrue information and vulgar comments about teachers can exist in the public space not only in online forms, as comments on blogs or in news sites, but also in social media spaces, which are a natural information channel for young people. The case mentioned by R17 shows that dedicated pages and groups can be found online for this purpose, with the sole purpose of creating and spreading negative information about teaching staff.

“When I was still attending middle school, a classmate set up a Facebook page called ‘Hejtet [place name]’. Through this page, students and alumni anonymously wrote offensive comments towards teachers and students from the middle school. The matter was reported to the police” (R17, M).

Among the various forms of attack on teachers through the dissemination of false information, the presentation of the situation described by R27 is particularly noteworthy. This story clearly shows that attacks can carry the suggestion of abuse against students. Such false information is particularly damaging to a teacher’s reputation because it is linked to a grave violation of conduct regulated by the criminal code.

“At my school a teacher was once attacked. It was a physical education teacher, and the whole situation took place in high school. Rumors spread around the school that this teacher was interested in his female students. On the Internet, posts ridiculing him began to appear on public websites. The whole incident was caused by the fact that the man was young and new to our school. There were also photos taken from hiding with mean comments. When the teaching staff found out, the man wanted to resign. The students responsible for the cyberbullying took responsibility and had to apologize personally” (R27, F).

Attacking teachers in the online media space can take many forms and can be linked not only to discrediting the teacher based on their profession, but also based on their gender. This was noticed and presented by R31, who pointed out that the attack can be carried out against not just one teacher, but several at the same time.

“At the school I attended there was an incident of three female teachers being attacked via the Internet. It was in middle school. The perpetrator was a boy. He uploaded pictures of the three female teachers to forums and attached captions of an erotic and mocking nature. He encouraged other people to comment on the photos, even those outside the school, and created rankings” (R31, M).

The posting of false information about teachers as presented by the examples above can have many motives, and such attacks are not limited to just the students themselves. An attack on a teacher in this form

is particularly acute because the posting of information in open information spaces means that any Internet user can access it. Teachers are also not always aware of the existence of this type of information and therefore have no means of defending themselves against false information, which may also imply a severe breach of the law or professional incompetence.

Direct Attack Through a Social Network

As mentioned in the earlier category, attacks on a teacher can be linked to students, but in some situations, the students' parents are responsible for the attack. An example is presented by R22, whose story describes how some parents were responsible for a direct attack on a teacher using social media. The motivation for such actions may be the parents' differing expectations of the ways in which progress related to learning content is assessed.

"This occurred when a mathematics teacher gave a low grade on a student's paper. The teacher was attacked by the parents of this student with negative messages on SNS Facebook. A few days later the parents were invited to the school for an interview" (R22, W).

An attack against teachers can take the form of not only simple dissatisfaction with the teacher-student relationship, but with threats to harm the teacher:

"At the school, where I work, one of the teachers was attacked via the Internet before I started work. There were mocking graphics and direct threats against the teacher. The teacher found the violent person, it turned out to be his former student who still attended the school but no longer had classes with this teacher" (R25, M).

Direct attack differs from other forms of attacks because it takes place through a 1:1 relationship, so one attacker and the teacher. Such a situation mediated by social media is different from the previous form of online vilification because it does not usually leave a permanent trace in the form of information available to others. An attack of this type requires the teacher's account to be found in the new media space and thus violates the teacher's private space in an intentional manner.

Recording Teachers

Another type of attack that occurs is the creation of videos featuring teachers without their consent. Such behavior raises several concerns due to the peculiarities of the Internet—in particular social media and communication channels, which allow multimedia material to be easily shared online without the teacher's knowledge and therefore consent. The videos are most often of a nature that negatively presents the teacher.

"There was just a one-off situation, where someone recorded a teacher in a lesson and added the video to Facebook. The situation was reported to the management, the person who was responsible for the video was reprimanded" (R9, F).

The situation mentioned by R9 provides an argument for restricting the use of smart phones on school premises. The recording of teachers can also be linked to the phenomenon of 'happy slapping' in which students provoke a teacher to behave in a certain way and then record the reaction to make it public.

Photomontage

A specific form of attack on teachers is the creation of images that are untrue. For this purpose, official photographs of teachers available on the Internet can be used to create photomontages. Images of this type can then be placed in various places, discrediting the person in question. An example of such an action is the story presented by R13 in which a female teacher was attacked through the creation of photomontages that sexualized the teacher.

"The boy disliked a certain teacher very much; you could see that it was reciprocated. He created various disgusting pictures with her, pasted her face into various pictures with uninteresting content, insulted her and posted many of them on the class chat. Someone from the students

informed the teacher about this and showed the 'masterpieces'. The teacher reported the matter to the class teacher, the headmaster, the student's parents and to the police" (R13, F).

The story depicted by R13 also shows the aftermath of the action in question, which ended with an appropriate punishment for the perpetrator. Nevertheless, given the characteristics of the Internet, it is important to be aware that photoshopping is a specific form of cyberbullying because once posted on the Internet, images (even if untrue) can continue to circulate and thus impact the teacher's image.

Memes

Memes, i.e., mocking graphics, with real images and often untrue dialogue, are another form of attack on teachers. This form is characterized by a slightly greater complexity than at least a direct attack via social media. As R4 points out, images of a teacher can have a typically ludic purpose that does not always presuppose harm to the teacher.

"Of course, memes were created between classes using pictures of the teacher, but this was never done as an attack or as an affair" (R4, F).

In contrast, R12 and R28 add that memes can be a source of discomfort for teachers, even though they are not intended to evoke such an emotion. Memes can therefore be interpreted and perceived in dual ways by the creators, the audience, and the teacher themselves. Nevertheless, it is important to be aware, as with other forms of attack, that memes posted online are not automatically deleted after a certain period and can also cause deferred reputational damage.

"A photo of a teacher was posted on the internet, which was compared to a painting by a famous painter. This resulted in a meme with the teacher. Even though the picture did not portray her in a bad light the teacher was very angry" (R12, F).

"I think the only situation that could be considered as such was the making of so-called 'memes' using pictures of teachers and sharing them online, admittedly these were not intended to offend any of the teachers, but a few of them felt offended by the way the students signed their pictures" (R28, F).

"At my school, pictures of teachers were often used to make 'funny memes'. The pictures circulated on the Internet and were available to every student" (R22, M).

Teachers' intrinsic qualities can provide the source material for memes. Their appearance, behavior, teaching style, or attributes related to the content delivered can become the source of satirical memes. However, the humorous purpose of memes can turn into cyberbullying in which the teacher is attacked in a way that goes beyond the boundaries of good taste and at the same time evokes negative feelings and discredit. The level of sensitivity of both the creators and the people portrayed in the meme can therefore generate dissonance in assessing the harmfulness of the meme, as evidenced by the examples presented by R26 and R32.

"A teacher who worked at the school had a peculiar appearance and way of being and as a result he was ridiculed among the students and memes were created on the internet with his image. The students had no inhibitions, they did whatever they wanted with his image, and this led to the teacher being dismissed from the school because no one respected him anymore, both among the students and sometimes the teachers" (R26, M).

"There was a situation in high school when memes arose related to the age of one of the teachers. She was an older woman who also spoke slower, had slower movements and so on. Many alterations of the pictures were created, including pasting the teacher's face into a dinosaur's body, also pasting her face into a caveman figure, etc. The memes, of course, spread quickly on the Internet and reached the teachers and further to the management" (R32, F).

It is also a feature of memes involving teachers that the teachers do not consent to their own image being made public—regardless of the context of presenting their own person in a satirical or intentionally attacking form. The situation described by R29 also shows the context of the creation of some memes in which the students seek to portray the teacher in an unfavorable light, using non-standard situations from the offline space to make them public online.

“At my school (middle school) a Polish teacher was the victim of cyberbullying. The students secretly took a picture of the teacher during lessons and used it to create a compromising meme. The students did not bear any legal responsibility, they only had a conversation with the pedagogue and the police and apologized to the teacher in front of the whole school” (R29, F).

Prank memes can become, in the hands of students, an effective tool for cyberaggression or cyberbullying directed at teachers. Regardless of the intent of the meme, the resulting image would include a representation of the teacher without their consent, would be shared without the teacher’s consent, and could easily be interpreted differently by the teacher. The level of sensitivity and humor involved means that memes can have the opposite effect to that intended.

Blackmail

Another form of attack is blackmail directed at the teacher. The aim here is to gain an advantage, e.g., to improve school grades. However, the act of blackmail presented by R6 was not only characterized by low effectiveness in achieving the student’s goal, but also made it relatively easy to identify the perpetrator.

“At my school, a teacher was attacked over the Internet about changing grades in the electronic diary. The perpetrator wrote many emails to the teacher, each time from a different—fake—address, and blackmailed him that if he did not change the grades of a particular student he would, for example, destroy his car. Unfortunately, the perpetrator managed to break into the teacher’s account in the electronic diary many times and change the grades. The case was solved by finding the computer to which the threats were sent. The perpetrator turned out to be the older brother of a student at the school, against whom legal consequences were drawn” (R6, M).

Given the small number of examples for this category, blackmail is not the most common form of threat against teachers, presumably due to the nature of this category of attack. Blackmail is also an activity that is regulated very strictly through the criminal code and can result in severe consequences, even imprisonment.

Hidden Cyberbullying—Internal Communication

Another form of cyberbullying involves actions for which the audience is limited. Such actions share several characteristics with the previous forms. Firstly, they present the teacher in an unfavorable light. Secondly, they are aimed at discrediting the person concerned. Thirdly, they are disseminated publicly, but within a specific—narrow—circle. The last element characterizing this form of attack on the teacher may be linked to the fact that the creators of such content fear the potential consequences should the content be released outside of the chosen group. An attack in a covert form—invisible to the wider community (including teachers)—can be linked to activities undertaken by the teacher (R2), for no apparent reason (R19), or due to extra-professional activities carried out by the teacher (R25).

“In my school a teacher was never attacked online, only made fun of the emails that came to the teacher in class” (R2, F).

“I personally know of one teacher (from a primary school) who was attacked with descriptions on the instant messenger Gadu-Gadu (in the old days very popular and the only messenger available). I know that the students were then held accountable, reprimanded, and restricted in their student rights” (R19, M).

“On a closed class group, students commented on the appearance of one of the teachers, posting pictures of the sports she attends” (R25, F).

However, it is important to be aware that digital information, despite being confined to a closed group in a mailing list, instant messenger, forum, or social network, can at any time be copied and disseminated publicly by the users of that e-service. Thus, hidden cyberbullying can become overt at any time, and thus go beyond the original intentions of the attackers.

COVID-19 & Teachers

The COVID-19 pandemic forced a rapid transformation of school activities from offline to online spaces. This period presented not only didactic challenges (referred to as crisis e-learning), but also contributed to the emergence of behaviors that had not previously occurred. The time of crisis e-learning provided a testing ground for teachers to implement new ICT mediated learning and teaching environments, thus improving their own digital competences while at the same time exposing themselves to novel attacks from students.

“Especially now with remote teaching, where teachers are even more vulnerable to attack. The onset of remote teaching resulting from the emergence of the pandemic was, after all, a huge wave of hatred and criticism against teachers, who were not allowed to defend themselves” (R11, F).

During the first phase of crisis e-learning in particular, teachers were confronted with several actions that were primarily aimed at disrupting the communication process between teachers and students. Actions introducing chaos during crisis e-learning took the form of using offensive words and displaying obscene content. Each of the situations described by R12, R21, and R24 tested not only the teachers’ digital competence, but also their ability to solve educational problems mediated by digital environments.

“As far as cyberbullying against the teacher is concerned, it is particularly evident during distance learning. I have encountered an instance when, during an online lesson on the Zoom platform, a student displayed offensive texts on the screens of the participants about the teacher in charge; moreover, there were also cases of participants displaying pornographic content during such a conversation” (R12, F).

“In eighth grade during a remote lesson someone invited unknown people to the lesson. The lesson was conducted through Zoom and there the teacher was insulted by some students. The matter was reported to the police by the principal” (R21, W).

“During one of the on-line lessons, a person who was not a student at the school joined the group of students (only his initials were displayed, which the teacher could not identify, this person did not respond to the teacher’s questions to explain who he was and how he joined the lesson). During the lesson this person was disrupting the lesson, posting malicious comments on the curriculum content discussed, inappropriate drawings and pictures were made on the desktop” (R24, F).

The period of the COVID-19 pandemic posed challenges for the entire school environment. The rapid transformation of the learning and teaching environment generated several technical and educational problems not previously encountered. The prolonged pandemic, the lack of methodological preparation for online teaching, and fatigue on the part of students created a series of uncomfortable circumstances that would trigger new forms of attacks against teachers.

Fake Profiles

Identity theft can be counted among the various forms of attacks against teachers. This phenomenon is linked to the creation of fake profiles with the aim of misleading other e-service users. Such a fake profile, allegedly owned by a teacher, is often responsible for creating problematic situations. The misrepresentation can consist of associating the teacher with situations that are inappropriate to their professional role, or creating fake profiles linked to free-time activities (e.g., a profile on a dating site). Examples are provided by R20 and R29.

“The students set up for one of the teachers a fake Facebook account, writing out various messages to various people. When the teacher found out about this, she referred the matter to the

appropriate person who knew how to delete such an account. Officially, it was not found out who had created the account” (R20, F).

“At my middle school, a group of students created a Facebook profile for one of the teachers. The teenagers took pictures of the victim from hiding and then inserted them on the profile they created, adding offensive descriptions and added unpleasant posts. Several students at my school found this amusing and made offensive comments and shared the posts. Reasonable students quickly reported the matter to the headmaster, and several other teachers also noticed the fake profile, which was immediately removed” (R29, F).

Another mechanism for this type of attack emerges from the stories related to identity theft. Usually, at the beginning of this type of attack, the teacher is unaware that someone on the Internet is impersonating them. During this time, the activities are represented by a fake profile and authorized with the teacher’s image. However, such a situation usually has a subsequent stage in which the teacher becomes aware of the existence of the fake profile, which requires corrective action, as presented by R25.

“The boy spied on the teacher both in and sometimes out of school and took compromising photos of her, then posted them on social media. The whole thing went on for maybe two months when the teacher found out about the student’s actions. Of course, she reported the matter to the school management and the management reported it to the police after which the matter was dealt with. The boy was unable to avoid compensation (from the parents, of course), which the teacher was prepared to take to court. However, the parents did not want to shake things up and paid the designated amount probably with the help of some mediator or something like that” (R25, F).

Identity theft using an image is an unusual form of attack on a teacher due to the timing of the attack and the lack of an immediate reaction from the teacher. The phenomenon is mostly intended, as in other forms of cyberbullying and cyberaggression, to discredit the teacher, but in a more complex way than, for example, memes or online vilification. Identity theft requires the perpetrator to carry out several actions and to commit a great deal of time to their work—it is not an action of the same order of magnitude as sharing a meme, for instance.

Digital Tool in Off-Line Environment

An attack on the teacher can also be carried out using digital tools, though with a transfer to the offline space. One category was identified from the survey responses, which clearly shows that ICTs can be a tool that can be used to ridicule teachers in a hybrid way.

“A mathematics teacher was the victim of cyberbullying at my school. Because he was an older man with huge glasses and a long, grey beard he was called ‘Father Christmas’. One year, during “Santa Claus” day, someone broke into the computer room and set up a wallpaper with Santa Claus on each computer desktop, with our teacher’s face on it. It did not take long to find the culprit, however. In all the rush, he forgot to remove the memory stick from the computer, and to his misfortune the item in question was signed with his name” (R21, K).

The example presented by R21 shows that cyberbullying and cyberaggression can move from online to offline spaces. This is also due to the characteristics of new media, which make it easy to create digital material that is readily reproduced and shared locally, or in the case of new media, globally.

No Cyberbullying

The last category that emerged from the analysis of the statements concerns the absence of attacks on teachers in digital spaces. The statements presented below clearly emphasize that there are many circumstances that protect teachers from the ten forms of cyberbullying and cyberaggression listed. Considering statements from the 11th category, it should be considered that the analyzed phenomenon does not occur in all environments and is therefore accelerated by certain risk factors.

"A lot of people in my close and extended family are teachers. However, I have never heard of any of them or any of the teachers I knew from school being victims of cyberbullying. This does not mean, of course, that this has not happened—I just want to say that I have never directly witnessed cyberbullying directed against a teacher" (R1, F).

Among the reasons for the lack of cyberbullying among teachers, the type of institution, where the educator works should be mentioned. In kindergartens and younger school classes (the first stage of education), this kind of activity does not generally take place. In these establishments, teachers feel safer in the context of cyberbullying and cyberaggression than in further educational stages.

"I am a kindergarten teacher and so far, we have not had a case of cyberbullying" (R5, F).

"I work in a kindergarten. I have never encountered such a situation" (R6, F).

The respondents emphasize that they did not encounter situations of attacks on teachers in the selected school establishments because teachers were an authority for young people. Open communication and appropriately prepared standards in place at school meant that, according to the respondents, there could not be an attack on educators in their schools, as is confirmed by R10's statement.

"In primary and middle school, for most of us, teachers were 'sacred'. We had no major problems with anyone and certainly not the kind to attack someone on the internet. In high school there was no harming of teachers on the internet either. If we did not like something we could always ask for help from our form tutor or the headmaster, who always helped us. There was no need or desire to attack someone online" (R10, W).

Another protective factor for teachers is the place of work, understood in terms of geographical location. According to R16 and R18, the location of the school in small towns and rural areas means that the existing system of social control and the rapid flow of information between people living in the community prevents (or limits) attacks on the teacher in the new media space.

"I'm from a small town and this is, where I went to primary school, middle school and high school. If I can put it that way, in my opinion, any attack on a teacher, including cyberbullying, would be some kind of 'hardcore' here. We all know each other very well here... And an attack on a teacher would be an exaggeration" (R16, M).

"There has never been a situation, where a teacher has been attacked over the internet. I come from a small village, where everyone knows each other, and I think no one would dare to do something like that" (R18, M).

The last category that emerged from the survey results clearly suggests that, like any e-risk, there is a group of people who, due to their sociodemographic characteristics, are at risk of a particular situation. This regularity also holds true in the case of cyberbullying and cyberaggression targeting teachers.

Research Limitations & Directions

This study contains several gaps related to the analysis and interpretation of cyberbullying and cyberaggression targeting teachers. Firstly, the statements analyzed do not allow for a complete typology, as the cases presented are the experiences of students and therefore do not include the main subject of the study, i.e., teachers. Secondly, the students' perception of this type of behavior may differ from the teachers' perception and interpretation of cyberbullying. Thirdly, the scope of qualitative research may not cover all types of cyberbullying and cyberaggression due to the dynamics of risky phenomena mediated by new media (Ziemba, 2018).

There is a clear necessity to extend the research to explore the mechanisms of online attacks against teachers from the victim's perspective, and this will require studying the experiences of the victims of cyberbullying and cyberaggression against teachers. There is also a need for quantitative research showing the current scale of the including a complete typology of cyberbullying and cyberaggression. Such a demand

stems directly from the empirical gap and the need to build prevention programs—strengthening digital safety based on up-to-date and representative research results (Tomczyk, 2020).

DISCUSSION

The purpose of the study has been to explore the experiences of high school students who have witnessed cyberbullying and cyberaggression towards teachers, since these practices are currently among the most analyzed electronic threats in media pedagogy (González Calatayud et al., 2016; Pyżalski et al., 2022). In this way, it is intended to raise awareness and warn the educational community about digital risks in the school environment and highlight the need to develop and implement best practices for the prevention of these antisocial behaviors. The first type of cyberbullying evidenced by the respondents is the defamation of teachers in an Internet forum. Akeusola (2023) showed how false and harmful statements about an individual can damage their reputation in an irreversible way, where these statements can arise in written or graphic form or even with links to defamatory content (Zakaria & Harun, 2020), and at the same time, defamatory material can be published very quickly and easily reproducible (Shariff & Johnny, 2007). Researchers such as Minor et al. (2013) highlight the need to carry out best practices, where a zero-tolerance policy is promoted and “provide training to students so that they would be more aware of how they come across to others in an online environment” (p. 25).

The second type described by the respondents is the direct attack on teachers on a social network through negative criticism, insults, or threats. Some authors have stated how this negatively affects the teachers' reputation and emotional well-being and can lead to professional demotivation (Rajbhandari & Rana, 2023). As stated by Frolova et al. (2019), this type of cyberbullying usually originates for a variety of reasons, such as disagreements about academic performance, personal conflicts, or differences in educational expectations. To reduce these behaviors, it is crucial to implement preventive programs that encourage positive collaboration between all agents in the educational community to combat such problems (González Sodis & Leiva Olivencia, 2023; Siddiqui & Schultze-Krumbholz, 2023; Torgal et al., 2023), where open dialogue is encouraged (Cassidy et al., 2018), to establish effective communication channels and educate stakeholders about respect and the importance of empathy (Wnęk-Gozdek et al., 2019).

The third type was the recording and dissemination of videos or images of teachers on the Internet without their consent. This practice of digital violence is harmful to teachers since the aggressors seek to humiliate, defame, or harass. Even on some occasions, the families themselves consider that “it is a silly child's play” (Wnęk-Gozdek et al., 2019, p. 603). Therefore, there is a moral disengagement in students as well as in society itself with aggressive behaviors and thoughts (Gini et al., 2014), since there is a lack of empathy and an incorrect representation of the figure of the victim (Agus et al., 2021), in this case, the teacher. To address this problem, Ali et al. (2020) proposes developing interactive videos to raise awareness about the harmful effects of this type of cyberbullying. In the words of Kaluarachchi et al. (2020), it is also necessary to implement strong school policies and educate students about digital respect and online ethics.

The fourth and fifth forms of cyberbullying were photomontages and memes, which involve the digital manipulation of images, sometimes with a humorous tone to create defamatory or humiliating content. These types of action are usually carried out in non-formal social networks, where the use of Twitter, Instagram or Facebook are the apps most used by students (Cricenti et al., 2022), which may negatively impact the image of the teacher as an educational professional. To combat this type of cyberbullying, it is crucial to implement strict school policies that specifically address the manipulation and non-consensual dissemination of images, for example, long-term policies that promote empathy and emotional intelligence (Balakrishnan et al., 2019), and consequently adaptive behaviors (Agus et al., 2021), even improve the teaching-learning process of students (Pulido Acosta & Herrera Clavero, 2015).

Digital blackmail was also highlighted as a form of cyberbullying towards teachers. Related studies highlight that violence against teachers increases teachers' fears about their personal safety (Chen & Astor, 2008), and there are still few intervention programs against school violence that are designed to protect teachers (Astor et al., 2005). The combination of education, awareness, and strong policies can significantly contribute to reducing online blackmail of teachers and promoting a safer and more respectful digital environment. Not only is it necessary to incorporate topics related to digital ethics and online behavior into

the school curriculum from an early age (Ondrušková & Pospíšil, 2023), but also as Akbulut and Çuhadar (2011) state, it is also vital that the schoolwork closely with parents to educate them about the importance of monitoring and guiding their children's online behavior. Furthermore, we suggest the establishment of an anonymous reporting channel so that anyone can report possible cases of blackmail.

Another type of attack on teachers emerged at the beginning of the pandemic. During this period the entire school environment faced fresh challenges, from technical problems to a lack of preparation for online teaching. The long duration, poor methodological preparation, and student fatigue created uncomfortable conditions that likely contributed to new forms of attacks against teachers. To reverse this trend, it is necessary to develop specific strategies to address disruptive behavior in virtual environments, highlighting both the importance of teacher training in digital skills and the effective management of conflict (Cataudella et al., 2021; Tomczyk et al., 2023), where emotional intelligence is a particular factor (Reyes & Pech, 2022). Furthermore, authors such as Cuellar Quispe (2022) point out the need to implement emotional support programs for teachers and students, it being necessary to recognize the psychological impact of the pandemic and providing resources for mental well-being (Stang-Rabrig et al., 2022). In other words, it is essential that teachers possess digital competencies to promote digital well-being, promote safe online behaviors and establish safe digital environments. This involves the implementation of various teaching strategies, methods, and measures in both formal and informal curricula, from the early stages of education (Tomczyk, 2020).

The eighth type described by the respondents was the creation of fake profiles on social networks to harass teachers. Perhaps a plausible explanation is due to the emergence of fake news about COVID-19 (Gupta et al., 2022), this being an unacceptable behavior that has negative consequences for people (Velandia et al., 2021), in our case, for the school community in general and for teachers in particular. We agree with the reflections of Jiménez et al. (2020) that many young people feel enabled by fake or anonymous profiles to do or say things that they would not do if their names were known.

The penultimate type of cyberbullying is digital tools in the offline environment, with studies that position it as one of the most frequent modalities, "under 15 years of age, offline bullying clearly prevails, around 27% in the 9 to 14 age group, compared to 20% in the 15-16 age group" (Larrañaga et al., 2019, p. 301). The offline space underlines the interconnection between the digital world and the real world, where Gassó et al. (2018) state that the speed with which information can be shared and the difficulty of controlling its dissemination pose additional challenges. However, these types of actions could have tangible consequences and be traced back to their perpetrators as cyberbullies transfer their actions to the real world. Effective strategies such as those mentioned previously are also necessary to combat this form, including underlining the importance of online responsibility and awareness of the real implications of digital actions.

Finally, there are sociodemographic patterns and factors that can influence the likelihood that teachers will be victims of cyberbullying. The respondents highlighted some factors such as age and geographical location in vulnerability to online risks, although the literature has also highlighted others such as the gender of the teacher (Moon & McCluskey, 2016). Close communities—such as those in a village or small town—act as a protective factor against certain types of cyberbullying. However, as stated by Chan et al. (2019), technology can also transcend geographical barriers, and cyberbullying is not exclusively limited to the immediate physical environment. Finally, the idea that cyberbullying can vary depending on the type of educational institution is sensible: students of kindergarten age will have far less access to technology than students in high school, and will also lack the means, and probably the motivation, to engage in such actions (Thumronglaohapun et al., 2022).

The findings of this study highlight the urgent need to integrate teacher training on digital literacy and online risk management issues. Given the growing panorama of cyberbullying and digital aggression towards teachers, it is imperative that teacher training programs incorporate specific modules on how to address and prevent these antisocial behaviors, through the promotion of open dialogue, effective communication channels and the promotion of a culture of respect and empathy online. These educational programs and strategies must be carried out among all actors in the educational community, including students, parents, and school staff, with the purpose of creating a united front against cyberbullying. Furthermore, it is essential that teacher training programs raise awareness among future educators about the emotional, psychological, and professional impacts of cyberbullying on teachers. For these prevention programs to be successful, it is

necessary for teachers to acquire digital skills that allow them to identify, manage and mitigate the risks associated with cyberbullying, as well as promote a safe and respectful online environment.

CONCLUSIONS

This study has highlighted how cyberbullying and cyberaggression towards teachers represent a worrying reality. These digital behaviors classified by the respondents into ten types not only undermine the professional integrity of teachers, but also affect the learning environment. To reverse these antisocial cyber behaviors, proactive rather than reactive steps should be taken. Schools should remember the importance of establishing connections both within the school and in the wider community and with the involvement of all stakeholders. Guidelines should be established and communicated so that students understand their responsibilities in the online environment—and what will happen in the case of transgression. If this is achieved, not only will the teaching staff be protected, but a positive educational space will also be promoted, with this having an impact on the academic and personal growth of the students.

The school's responsibility in mitigating cyberbullying is crucial and involves proactive intervention to counteract antisocial cyber behavior directed at teachers. Implementing comprehensive educational programs that address digital awareness, promote empathy, and foster respect online is critical. In addition, it is essential to establish clear and consistent school policies against cyberbullying, including the provision of safe and confidential reporting channels. For all these reasons, the management teams of educational centers must provide psychosocial support to teachers affected, thus promoting a school environment, where they feel supported, and where students understand the serious implications of online attacks.

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