

## VIOLENCE AMONG PEERS IN THE REAL AND VIRTUAL WORLD

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In this paper we analyze the similarities and differences between traditional (physical, verbal, relational, sexual) and electronic forms of violent behavior among peers. Violent behavior, which is a characteristic of the real world (insults, disinformation, slander) has been extended to the virtual world, but modern technology has also allowed: a) new forms (flaming, electronic harassment and intimidation, false imprisonment, assault video-taping and sexting) and b) more intense and brutal youth participation in violent activities, most likely because of the anonymity, indirect contact with the victim and deflection of responsibility. Violence perpetrators in the real and virtual worlds both have similar characteristics (lack of empathy and shame, neglect of moral norms, a tendency to minimize personal guilt and responsibility, ignoring the consequences and victim suffering, and similar family problems), and the victims experience almost identical consequences: psychosomatic, emotional (especially anxiety, depression, suicidal thoughts), educational, as well as difficulties in establishing and maintaining social contacts. Because of the large exposure and serious risks to psychological health, safety and welfare of children, there is a need to educate children, parents, teachers and doctors about the possible threats in the real and virtual worlds, and scientific research should provide tools for effective prevention and targeted interventions to reduce peer violence. **Conclusion** - With regard to peer-to-peer violence in the real world, modern technology has made new modalities and the more intensive participation possible of children in violent activities, but the perpetrators of these forms of violence have similar characteristics, and the victims identical consequences.

**Key words:** Peer bullying ■ Electronic violence ■ Bullies ■ Victims

## Introduction

There have always been occasional conflicts among peers due to incompatibility of goals and values, different understandings, ineffective communication, attempts to control, etc. Although these differences might be only perceived, the antagonistic feelings and actions that support are always real, with an expressed tendency to grow into hostility and violence.

As opposed to conflicts, bullying is a deliberate, hostile and repeated action by one or more students, of unequal real or perceived physical strength, i.e. psychological or social power, because of whom a child suffers physical and/or emotional harm, and is helpless to resist and defend themselves. Thus, there are three criteria used in determining peer violence: a) frequency, b) intention and c) imbalance of power (2). However, the imbalance of power among peers is not only determined by physical strength, but also the psychological aspect should be taken into account, together with social power (e.g. children of wealthy parents often enjoy protection and support in school which puts them in a privileged position).

Traditional peer bullying has been identified in numerous studies as the leading school and public health problem (3), because of the consequences it causes and the number of children who have repeatedly been exposed to it. But, modern communication technology, particularly mobile phones and the Internet, have enabled new ways for old forms of violent behavior and encouraged new ways of violent activity among peers in the virtual world. Therefore, this new kind of violent conduct, which includes the use of electronic devices for repeated, intentional and hostile behavior towards peers, with the aim of inflicting pain, injuries or damage, is commonly called electronic violence or cyberbullying (4). Traditional violence among peers has often been studied and is

well- documented, but since the problem of cyberbullying is relatively new, it is still not sufficiently known.

Therefore, the aim of this paper is to analyze the characteristics, forms and consequences of violence among peers in the real and virtual worlds, as well as to point out the similarities and differences between them, in order to help create effective prevention programs.

## The prevalence of peer violence

In a study by Craig et al. (3) about the extent of traditional forms of peer violence (physical, verbal and relational) conducted in a multinational sample (n=202056) of children aged 11-15 years from 40 countries in Europe, North America and Israel, it was found that exposure to violent behavior occurs in a range of 8.6-45.2% for boys and 4.8-35.8% for girls. The lowest prevalence was reported in north European countries.

In a study conducted by UNICEF (1), which involved 5215 children from Croatia, aged 10-15 years, it was found that 53% of these children had been exposed to traditional forms of peer violence several times in recent months, and 8.6% of girls and 9.9% of boys were exposed to it frequently (monthly and weekly). „Peer violence in elementary schools“ in Bosnia and Herzegovina, according to a report by Ivaković and Hukić (5), is very widespread, 45% of children experience physical, 34% emotional and 7% social violence. These data suggest that traditional violent behavior among peers is a serious problem in schools around the world.

Thanks to the availability and opportunities brought by new technology, the results of recent studies point to the continued growth of cyberbullying. Most often it is estimated that the prevalence of electronic violence ranges from 10 to 35% (6, 7, 8) or 20 to 40% (4), while others warn of considerably higher

rates, up to 70% (9, 10). The aforementioned study conducted by UNICEF in Croatia (1) found that students were most often exposed to unpleasant situations on social networks (38.7%), disturbing text messages (33.9%), and had also experienced discomfort in forums, blogs etc. (15%).

Although different studies use a wide variety of concepts and research instruments, making it difficult to compare their results, all data on the extent of traditional and electronic violent behavior among peers are disturbing.

### **Characteristics and forms of violent behavior towards peers in the real world**

In the spectrum of traditional, often repeated, malicious violent behavior towards peers with different status and power, the most distinguished are:

Physical violence which includes any physical act with the potential for injuries (pushing, pulling, pinching, slapping, hitting);

Verbal violence, i.e. deliberate use of words to inflict psychological harm (yelling, insults, calling bad names, causing fear, threats, etc.);

Relational violence which refers to sophisticated, subtle forms of emotional manipulation of peer relationships (11);

Sexual harassment and violence includes activities without contact (lewd comments, inappropriate gestures) or with contact (from inappropriate touching to abuse).

While physical and verbal violence are expressed directly or openly, relational violence is usually referred to as an indirect or disguised form of violence. The main feature of indirect aggression is that the offender intentionally inflicts harm to another, while trying not to expose and to protect themselves or remain anonymous, thus avoiding any counterattack, and the possible condemnation of the environment. Social aggression is very similar to relational and refers to beha-

avior aimed at destroying self-esteem and social status. Many researchers point out that covert, relational and social aggression can be described by the same construct. What is common to all of them is that, by manipulating a social relationship, the bully tries to harm the victim's reputation and status in a certain group or inflict the emotional pain of peer rejection or exclusion, with differences in the manner of expression. Therefore, Coyne et al. (12) suggest the terms "direct and "indirect relational violence" among peers, and these terms shall be used for the purposes of this paper.

The most common forms of direct relational violence are: a) open refusal of friendship, b) establishing requirements and restrictions for the friendship, c) threatening to break the friendship, d) ignoring or e) openly rejecting the child from a group or a working team (13). Direct forms of relational violence are often extended by a physical form, such as imitation, caricature, showing grimaces, etc.

The most common indirect forms of relational violence are telling lies, spreading lies, slander and motivating others to reject or exclude the victim from their circle. The indirect relational forms of peer violence are more common, especially forms such as mocking behind someone's back, ignoring, not inviting to birthday parties, etc.

Modern media have proved to be perfect and powerful in the practice of relational violence, and have also contributed to the spread of traditional forms of bullying (14).

### **Characteristics and forms of violent behavior towards peers in the virtual world**

Children and adolescents have embraced the Internet as a tool for learning, entertainment, and socializing, which is why it has become an integral part of their upbringing and life. Unfortunately, attention has frequently been drawn to harmful behavior in the virtual

world, especially to cruel treatment of peers (15).

Some authors have classified electronic forms of violence by the type of media (16), others by the type of activity (15, 17). Electronic violence involves the use of various media, such as mobile phones, computers, smart phones, etc., and their different features, i.e. violence appears through different communication channels, mostly via SMS and MMS, e-mail, blogs, forums, online websites, video messaging, and social networks (Facebook, MySpace, Twitter).

According to the type of activity, electronic violence toward peers is most often categorized in these subtypes (15, 17, 18):

**Flaming:** a type of violent behavior that includes sending vulgar and abusive text messages via e-mail, with the aim of hurting a particular individual or group. It is often called „flame war“ or war(fare) by offensive messages (15, 17, 18);

**Online harassment:** sending offensive messages repeatedly, with the aim of insulting and harassing someone. Sometimes it is referred to as „flaming“;

**Cyberstalking:** a kind of repeated intense harassment that includes intimidation and threats, even physical harm, in order to permanently cause fear;

**Cyber denigration:** sending and publishing gossip or rumors that may harm the individual's reputation;

**Cyber outing:** telling secrets, posting pictures, sharing embarrassing information. The goal of sending or publishing material that contains embarrassing private information, messages or pictures is to cause embarrassment and emotional pain to a peer;

**Exclusion:** deliberate exclusion from an online group, as well as removing or deleting from the list of friends;

**Impersonation,** stealing passwords, and then sending material to bring people in danger or harm their reputation;

**Disinformation:** spreading false information to the detriment of others via e-mail or Websites. Also, photographs are often altered and then published in order to make a person unattractive, ugly, etc.;

**Happy slapping:** sharing footages of an attack is a relatively new form of electronic violence that occurs when the perpetrator mocks a peer by posting videos (15, 17);

**Sexting:** sending messages with sexually explicit content or sending partially nude or sexualized images.

Just as the traditional form, electronic violence can also be direct (threats) or indirect (spreading rumors, encouraging isolation). Since communication technology is constantly advancing and changing, it is important to note that definitions and forms of electronic violence are also changing.

The analysis of traditional and electronic forms of violent behavior among peers shows that violent behavior, characteristic to the real world, such as insults, name calling, threats of harm, spreading rumors, slander, etc., has extended to the virtual world. However, the transformation of real peer violence into virtual violence has resulted in new forms of expressing hostility, such as sending video messages, creating Websites with unpleasant content, etc. (15, 19, 4). Some authors tend to see electronic violence only as an expanded form of basic peer violence (10), i.e. the primary difference is attributed to the use and nature of modern technology, which simply allows different variations of violence (according to 19). Thus, Li (19) points out that electronic violence is not a separate entity and suggests that it should not be examined separately.

### **Conceptual differences between violent behavior towards peers in the real and virtual worlds**

Regardless of the similarities noted in the definitions, which refer to intentionality, repeti-

tiveness and actions that cause harm or pain to another person, together with the similarity of the manner, i.e. forms of traditional and electronic violence, there are also many differences between them.

In defining traditional violence, the emphasized criterion is the imbalance of power, but in the virtual world, understood in the context of peer violence, the difference in power, especially physical strength, is irrelevant.

In the real world, traditional violence usually occurs in direct contact, at a certain time and in the same physical space, i.e. often during the school day or on the way home. It is this spatial and temporal framework that allows the perpetrator to be easily exposed and punished, and the victim seeks help or is protected. Physical violence can easily be seen, and malicious activities (insults, threats, etc.), or information spread slowly and are available and known to a narrow circle, such as students in the class or school (20, 21).

The main characteristic of violent behavior in the virtual world is the lack of physical interaction. Violence can happen at any time or at different times, which is why it is often called „non-stop“ violence. There is no physical framework, i.e. the location of a violent activity is usually unknown. A violent act can be sent from school, home, an Internet cafe or a park. Therefore, the victim is available at all times and the chances of defending themselves are small. There is also little chance that the perpetrator's identity will be revealed, or that they will be judged by the environment or suffer punishment (20, 21).

However, the chances that malicious information spreads quickly and becomes available to widest range of people in a long term, are huge. Precisely the accessibility and rapid transmission of that information, which may stay online for a long time, make this form of violent behavior especially harmful.

It can be argued that the nature of electronic violence is different in several as-

pects: the victim cannot avoid the violence, which is not limited by time or location, and information spreads more rapidly and is easily accessible (22).

In comparison to traditional violence, electronic peer violence has many new factors in the dynamics and severity of violence, its „ubiquity“, the widespread involvement in violent activities and the increased cruelty of young people in the virtual world.

### **Theoretical approaches to the reasons for violent behavior among children and adolescents**

Usually children's engagement in violent behavior toward their peers in the real world is ascribed to learning by observing and supporting that kind of behavior, together with distorted, dysfunctional thought patterns. Thus, the theory of Social information-processing (24), explains children's and adolescents' violent behavior by the deficits present in some components of social cognition. It is believed that children in multilayered, undefined and provocative social situations often attribute their peers with hostile intentions and wrongly interpret their words, gestures and feelings, i.e. their preference for hostile attributions is being emphasized.

The theory of cognitive distortion states as possible reasons for violent behavior the problem of locating the problem outside the person and diminishing the severity of consequences. Both theories criticize the neglect of emotions, particularly anger.

There have been attempts to explain the reasons for adolescents' offensive behavior in the virtual world theoretically tried by online disinhibition. Suler (23) considers that the most important factor of the effect of disinhibition is anonymity. On the one hand, anonymity allows children and young people to share their secrets and personal information, bring themselves into an unenviable position or do something they would never

do in the real world. On the other hand, it is this feeling that they are invisible, as pointed out by Willard (15), that reduces the concern that they will be punished or will experience judgment from their social environment, or the victim's revenge. Besides the fact that anonymity assures that their identity will not be revealed, it encourages a sense of reduced responsibility, but increased power (23).

Another important reason for the prevalence of violent behavior in the virtual world is the lack of direct contact with the victim, which makes it easier to be cruel when you do not see the victim's face. Since they cannot see the victim, online bullies have no feedback on the emotional reactions and consequences of their behavior, which is why their feeling of empathy is distorted and their sense of guilt reduced. The lack of feedback on the suffering and feelings of the victim is a possible reason to believe that behavior in the virtual world is just a game or a joke, which cannot do any harm and can easily be rejected or ignored by the victim. In addition, online bullies tend to deny their responsibility saying it was not them who did it, but their „online me“ (15).

Therefore, the perception of invisibility, the indirect contact with the victim and deflection of responsibility are very important reasons for the growing number of young people who behave violently in the virtual world. There is also a large number of victims whose vulnerability is particularly exacerbated by the potential „ubiquity“ of violence (7, 17) and the sense of insecurity.

According to socio-ecological theory, violent behavior among peers can only be fully understood when observed within the context in which it naturally occurs. In fact, the ecological model emphasizes the complex interaction among the children, i.e. their individual characteristics and factors passed on from their family and community into their school, in addition to not neglecting the cul-

tural context and sympathetic views of violence in general.

Starting from this model, which puts the individual in the center, Chen and Astor (37) proposed a new model in which an important role is played by school variables as mediators between the risk factors and perpetrating violence. According to this model, peer violence is associated with non-school variables (primarily the pupil's characteristics and family variables, and especially parental control and domestic violence) and school variables (such as lack of engagement, bad peer pressure and poor relationships with teachers).

### **Risk factors for violent behavior towards peers**

When it comes to traditional peer violence, considering the risk factors, what is particularly emphasized are impulsivity and poor anger management. In terms of family factors, the most emphasized are lack of strong bonds with the child, poor supervision and neglecting the child's needs, and parental modeling of aggressive behavior. Schools and teachers play a crucial role in tolerating or discouraging aggressive behavior. Community attitudes towards violence, and intolerance towards all types of violence affect whether violent behavior toward peers is considered normal or acceptable.

When it comes to violent behavior, the time spent in on-line communication is considered in numerous studies to be an important risk factor for violent behavior (10). However, Willard (15) states some other risk factors: a) familiarity with technology; b) lack of knowledge about the hazards and possible protection, together with the innocence of children; c) vulnerability, associated with emotional instability and dissatisfaction with the situation and relationships in the family (divorced parents, not getting along with parents) and school (interpersonal misunder-

standings and difficulties in achieving success) and in close relationships.

A particular risk group are adolescents prone to other problematic behavior (consumption of alcohol and drugs). Willard (15) points out that, higher the degree of risk, higher is the possibility that the young person, looking for acceptance, will be more and more oriented to the online community, and be more sensitive to manipulative influences. The previously mentioned poor relationships with parents are likely to be a reason for their children to rely on, confide in and seek help from them less in difficult situations.

Violent behavior, whether traditional or electronic, does not happen because of single factors or individual characteristics of children, but is more often explained by the influence of various interactions among individuals, their peers, the school, the family and the community.

### **Bullies, victims and observers in real and virtual worlds**

In peer-to-peer violence, alongside the victim (the abused child) and the main culprit who initiates the violence and bullies the child, there is a large number of pupils who observe what is happening and react differently to the victimization.

#### **Perpetrators of traditional violence**

Students prone to violent behavior towards peers in the real world are described as physically and/or psychologically stronger and more popular among their peers, from whom they gain approval, so they are encouraged and empowered to behave violently and satisfy their need for domination and power over others. Some of them calmly, confidently, deliberately and intentionally use violent behavior to meet some of their own objectives (proactive aggression). They are focused on gaining power and success, disregarding relationships

(25). They believe that aggressive behavior is worth it because of the visible results that are achieved, such as raising their sense of personal value or the submission of others.

Others behave impulsively, arrogantly and extremely defiantly. They have more aggressive attitudes toward their environment, and generally have a positive attitude towards violence (37), which they consider the most appropriate way to solve problems. Since they have difficulty with processing social information, they tend to interpret signs from the environment and some benign behavior of their peers or teachers as hostile. Regardless of whether the external stimulus was actually hostile or only perceived that way, it can cause a great deal of anger associated with impulsivity and expecting a negative outcome, and because of poor coping skills and behavior management, it usually results in extremely hostile statements with a high proportion of revenge (reactive aggression) (24). This form of reactive aggression is most often associated with harsh parental discipline and abuse, or witnessing domestic violence. Such children are shy, unpopular, and socially less competent. They usually have a negative attitude towards school, which is particularly noticed during secondary education. Traditional violence is associated with poor parental supervision and low family cohesion (26). In recent years, researchers' attention has been occupied with questions of morals and values among young people prone to violent behavior in the real and virtual worlds. Studies have shown that bullies have a developed moral judgment, but not compassion, have a lower level of moral motivation and a poorly developed sense of shame and guilt (25).

#### **Perpetrators of relational violence**

In order to reach their goals, achieve social dominance and manage the relationships of their peers, girls and also boys use different covert, sophisticated and aggressive strate-

gies. The affinity of boys to relational aggression is associated with the strict control of their mothers and physical punishment, while the father's psychological control is positively associated with relational aggression found in girls (27). It is believed that relational violent behavior between brothers and sisters, as a sort of a „brotherly training” is a significant risk factor for relational violence against their peers (27).

Essau and Conrardt (24, 19) point out that children who are prone to relational violence are to a greater extent emotionally and socially maladjusted, lonely, less popular, and feel unhappy and desperate in relationships with peers, which is then reflected in achieving quality relationships, and results in discontent and despair. It is possible that the feeling of despair is precisely the reason for relational peer violence, and the sense of loneliness and rejection motivates them to retaliate, causing a threat to close relationships which, especially for girls, have great value.

### **Perpetrators of electronic violence**

Since modern technology eliminates differences in physical strength and allows anonymity, it has led to the fact that even children who would not behave violently in the real world, become bullies. As a result, perpetrators of electronic violence are described in a different way. Therefore, it is said that they spend more time using digital devices, especially the Internet, mostly for communication (26, 27, 21). Children who behave violently in the real world are usually violent in the virtual world too, (10, 9) but it is necessary to point out that children who are victims of violence in school may become bullies in the virtual world (9). Their relationship with their parents is weak and their parents are less involved in their online activities and generally control them less (26, 14, 17). The most common motives for violent behavior in the virtual world are vengeance (14, 17) and entertainment (16).

It seems that the preference for electronic violence, mainly because of its anonymity and the indirect confrontation with the victim, is a consequence of a weak sense of empathy (25). Seeing electronic violence as a fun activity, which causes the victim no serious consequences, leads to ignoring moral norms (25). To understand the nature of violent behavior, it is also necessary to take into account the values which lead an individual to estimate what is good and what is not, i.e. what they believe to be right or wrong, which affects their assessment of a moral action.

Adolescents who are prone to accepting traditional values, customs and culture and try to avoid actions that violate social forms (compliance) behave less inappropriately, are less violent toward their peers, whilst focusing on achieving dominance and control over others is positively correlated with violent behavior towards peers (25).

Studies of sex differences, when it comes to participation in peer violence, even though it is conducted using modern technology, have resulted in conflicting findings. Some findings suggest that girls are more prone to this kind of violent behavior, while others find that boys are more violent in the virtual world (7, 17).

### **Common characteristics of perpetrators of violent behavior**

Regardless whether children behave toward their peers in the real world openly violently (physically or verbally) or covertly, or use modern technology to cause harm and pain, they have some similar characteristics. Primarily, empirical studies have confirmed the lack of empathy (24, 25). Children prone to violence in the real and virtual worlds show a low level of morality and a disregard for others, a lack of guilt and disobedience (25).

Both groups try to justify their immoral behavior and are prone to cognitive restructuring of harmful behavior (moral ju-



stification and presentation of the actions committed as less harmful), minimizing their personal responsibility, diminishing the negative consequences and attributing blame to the victim (29). Both traditional and electronic peer violence are associated with poor parental supervision and control, and low family cohesion (28, 14, 17).

## **Victims**

### **Victims of traditional violence**

Children who are most exposed to traditional forms of violence are physically weaker, shorter and not able to protect themselves from abuse. Children with disabilities, physical impairments and disadvantages (verbal, motor disabilities etc.) are at particular risk are. It has been stated in numerous studies (2, 30) that the victims of traditional forms of peer violence, regarding their character traits, are more quiet, cautious, anxious, insecure, sensitive and have less developed communication skills and problem solving skills. These might be the possible reasons why they are often isolated and poorly connected with other children, and in particular why they have few friends. Due to their low self-esteem, they often perceive themselves as unattractive, unsuccessful and insignificant, and they tend to blame themselves for being a victim. Having this kind of an attitude and not standing up for themselves, they send bullies the message that they can continue with their aggressive behavior with no consequences.

### **Victims of electronic violence**

Violent behavior in the virtual world is focused on the appearance and behavior of children, especially young people with disabilities and special needs, and those who belong to different ethnic groups (31), and it is mainly directed towards individuals (10). Studies have found that victims spend more time online than their peers, and the ones who

extensively use technology to communicate with others are particularly at risk (10, 6, 16). Those students who are aggressive towards others in the real world often become victims of electronic violence (9) and those they hurt pay them back in the same measure, because they were unable to stand up to them or avenge themselves in the real world.. However, Gerson and Rappaport (31) warn that those who do not participate in traditional violence can become victims. In some way, modern technology has allowed even children who would not in any way participate in violent behavior in the real world to turn into bullies. While some point out that girls are more often victims of electronic violence than boys, others say that it is equally probable for both girls and boys to become victims of electronic violence (6, 32). As in other cases of traditional violence, victims of electronic violence think they are not popular compared to their peers who are not exposed to violence, they are more likely to consume alcohol and often have problems in school (28).

### **The common characteristics of victims**

On the basis of on the previous analysis, it may be concluded that the most common victims of traditional and electronic violent behavior by their peers are those who have physical defects, or who diverge in their behavior or belong to different social groups than most children. Victims of traditional and electronic violence have very similar consequences (physical, emotional, social and educational).

### **Observers**

Hymel, Rocke-Henderson and Bonanno (29) state that 85-88% of children witness violent behavior toward their peers, but only 11-25% stand up for the victim. Many just watch, but some also join in. So it may be said that violence in the real world is often a group pro-

cess, more children are involved in different ways, either actively participating or passively observing, and in this way supporting the violence. Olweus (2) states that alongside the main perpetrator and their victim, some of their peers take an active role, but do not initiate the violence (followers). Others support violent behavior by cheering and supporting the offender, but do not actively participate (passive bullies or followers). The largest group consists of those who merely observe violence from a distance and do not express their attitude (observers). In this group we can classify those students who do not support violence and think that the victim needs help, but cannot bring themselves to help or rescue them (possible defenders). Only a smaller group actively helps the victim to defend themselves, and later provides support and comfort (defenders). With their support of violence and indifferent attitudes, observers can trigger violence or additionally extend it. The observers cite different reasons for their inaction: a) fear that they will provoke anger in the bullies and then become victims themselves, b) they believe that prevention of violence is not their responsibility (diffusion of responsibility).

Unlike real world violence, violence in the virtual world is more directed at individuals. But the observers' role is important here, too. Some of them stimulate and support or just watch in front of the screen, but do not want to intervene. Willard (15) calls them „harmful bystanders“. Unlike them, the „helpful bystanders“ seek to stop the harassment of others, and warn that they will reveal the addresses (of blogs, etc.) and perpetrators, and seek help from adults (teachers, police, etc.). In the conclusion of his study, Willard (15) points out that, given the nature of electronic violence, one of the most important things that can help reduce it is encouraging students to become useful active observers.

## **The consequences of peer violence in the real and virtual worlds**

Finally, it can be said that victims of traditional and virtual violence, depending on their age and the severity and frequency of their exposure to violence, suffer similar consequences.

### **Physical consequences**

Regardless of whether they are exposed to traditional or electronic violence, many children, especially immediately after experiencing violent behavior, may have a variety of psychosomatic symptoms, such as headaches, stomach ache, backache, dizziness, difficulty sleeping, morning fatigue, bedwetting (2, 33, 36). Among the long-term physical consequences, the same authors also include eating disorders, especially in girls in adolescence. Perren (34) points out that victims of electronic violence have more physical problems than their peers, who have not been exposed to it.

### **Emotional consequences**

Children who have suffered traditional forms of violent behavior feel inferior, lonely and overly sensitive in the short term, but researchers also warn of the emergence of suicidal thoughts. In the long term, they feel anger and resentment at the world, which they perceive as an unsafe place, and throughout their whole life they are followed by feelings of helplessness and hopelessness, which are associated with anxiety and depression (2, 33, 36).

Researchers warn of similar problems experienced by children who have been exposed to electronic peer violence (26). Victims and perpetrators of electronic violence are six times more likely to report similar problems, compared to their peers who have not had such experiences (26).

Thus 93% of children who experience online violence reported that they felt anxious and sad (9). Hinduja and Patchin (17) state that 38% of victims of electronic violence felt vengeful, 37% felt angry (especially boys),

while girls (24%) more often felt helpless and pitied themselves.

The above shows that victimization correlates with feelings of sadness, anxiety, loneliness, helplessness, fear and anger (26, 9, 17, 36). As in the traditional cases of violence, researchers warn that victims of electronic violence show twice as many depressive symptoms (31) or increased risk for depression (34). However, children exposed to electronic violence have a greater risk of committing suicide than their peers who are exposed to traditional forms of violence (17, 31).

### **Social consequences**

Due to their loneliness, their tendency to withdraw and isolate themselves, and their low self-esteem, these children perceive themselves as different from their peers, so that victims of electronic and traditional violence have problems establishing and maintaining close relationships, and these problems increase during their lives. Victims of traditional and electronic violence are more often involved in other problematic behavior, such as alcoholism and drug abuse (6, 22).

### **Academic consequences**

In cases of peer violence in the real and virtual worlds, when it comes to academic achievement, short-term consequences appear in the form of frequent absences from school or resistance to going to school and poorer school performance (9, 36), which in the long-term has an impact on their school and life achievements. The studies of the differences in the effects of traditional and electronic violence have not found uniform results. Some argue that the consequences of traditional violence are more severe (according to 17), while others say that electronic violence has more severe consequences, because it is more difficult to cope with, reaches a wider circle of people (9), and photos

and videos are particularly harmful (35). The third group claims that the effects of these types of violence are comparable (34).

### **Guidelines for practical handling**

Since violent behavior among peers in the real and virtual worlds is a growing problem, it is necessary to mention some effective programs that may contribute to its reduction. Particularly good results have been achieved by reinforcement and behavior control programs, focused on setting clear goals for strengthening positive behavior, such as pro-social interaction with peers, and for reducing negative behavior.

Another effective approach is the cognitive-behavioral approach, focused on problems of social cognition and social problem-solving (24). Since the children prone to violent behavior towards their peers have flaws in coding and interpreting social information, they need help in curbing their impulsive responses, solving problems and practicing these skills in various situations (24). Once they take control of their problem, it is recommended that they practice compassionate, supporting and cooperative behavior.

Newer programs, such as the social competence learning program, combine all the elements listed in the previous programs, such as: communication training, anger management exercises, self-observation, understanding, attribution and learning how to solve problems (24).

According to the theory of social ecology, quality interventions must also cover other systems, primarily the family and schools. In this sense, without programs aimed at the parents of violent children and the victims of violence, and education for teachers, major breakthroughs cannot be expected. It is also necessary to continuously sensitize the public about the responsibility and importance of being involved in preventive activities.

## Conclusion

According to the results of the studies analyzed above, what causes the most concern is the prevalence of all forms of violent behavior, which have almost become epidemic, together with the increase in cruelty by youth in the virtual world, which is further enhanced by anonymity, indirect contact with the victim and the deflection of responsibility. These data suggest that preventive school programs are not efficient. But compared to traditional violence, the role of schools in preventing electronic violence is rather limited, but nevertheless necessary and important. Teachers must first of all a) educate children about the possible dangers and risks they might face in both the real and the virtual world, b) consistently respond to all forms of violence and intervene fairly and professionally, c) provide support and assi-

stance to children who are victims of violence, but also help bullies to correct their behavior. The responsibility of schools is to cooperate with parents and start initiatives at all levels in order to prevent all forms of violence, from within the school (developing prevention programs and including education of students, teachers and parents) to creating legal conditions and regulations. This paper focuses on a comparative review of the external features of peer violence and its protagonists, but it is suggested that future research should focus attention on the cognitive and moral characteristics of this group of children, the processes of motivation and the role of the environment, in order to aid a better understanding of this phenomenon.

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