

Educational challenges of emerging risks in cyberspace: foundations of an appropriate strategy for preventing online child victimisation *

Retos educativos ante los riesgos emergentes en el ciberespacio: claves para una adecuada prevención de la cibervictimización en menores

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Abstract:

In just a few years, technological changes have transformed how people interact and communicate with each other, in particular among so-called *digital adolescents*. The impact of technology on routine activities and mainstream culture has led to an increase in

young peoples' exposure to psychological and criminological risks. As a result of this new psychosocial trend, new educational challenges are appearing and it is becoming more necessary to react to these challenges on the basis of an adequate diagnosis of psychology and pedagogy relating to adolescents.

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Criminological theories and research have tried to identify risk and protection factors to understand victimisation processes in more depth and improve prevention strategies. In this context, it is necessary to develop educational programs that consider personal, familial, and situational vulnerabilities and weaknesses in order to foster resilient individuals who can successfully confront the risks inherent to cyberspace. By analysing specific forms of cybervictimisation, guidelines based on criminological research and the most frequent victimisation processes will be identified in order to improve design of educational programs focused on parents, educators and potential victims.

Keywords: cybervictimisation of minors, cyberpsychology, education in cyberspace, pedagogy of prosocial values, communicating to prevent crime, criminological theories useful for education, cyberbullying, grooming, sexting.

Resumen:

El avance tecnológico ha transformado en pocos años la forma de interactuar y comunicarse entre las personas, especialmente entre los denominados *adolescentes digitales*. Su impacto en las actividades cotidianas y en la cultura dominante ha propiciado, asimismo, un incremento en la exposición a riesgos psicológicos y criminológicos por parte de los

menores. Ante esta nueva realidad psicosocial, se plantean nuevos retos educacionales que deben partir de un adecuado diagnóstico de la psicología y pedagogía en relación con los adolescentes.

Las teorías e investigaciones criminológicas vienen tratando de identificar los factores de riesgo y de protección con la finalidad de comprender con mayor profundidad los procesos de victimización y mejorar las estrategias de prevención. En este contexto, conviene avanzar en programas educativos que tengan en cuenta las carencias y vulnerabilidades personales, familiares y situacionales de los menores, a fin de fomentar el desarrollo de personas resilientes que sepan afrontar con éxito los riesgos que se fraguan y surgen en el ciberespacio. Mediante el análisis de las concretas formas de cibervictimización se pretende señalar algunas pautas basadas en la investigación criminológica y en los procesos de victimización más frecuentes en los entornos en que se desenvuelven los menores, de modo que puedan servir en el diseño de los programas educativos dirigidos a padres, educadores y potenciales víctimas.

Descriptores: cibervictimización en menores, ciberpsicología, educación en el ciberespacio, pedagogía en valores prosociales, comunicación para la prevención del delito, teorías criminológicas aplicables en educación, *cyberbullying*, *grooming*, *sexting*.

1. The anthropology of the smartphone and criminological theories applied to adolescent cyber-victimisation

With the proliferation and spread of the use of ITCs in contemporary society, a new *relational paradigm* has established itself in personal and social interactions. The line separating the real-me from the digital-me is ever thinner and more patchy. Indeed, in people's everyday activities, and especially with so-called *digital natives*, communication is increasingly based on virtual media. Even the offline world and online reality intermingle, for example, through augmented reality. All of these changes in the physical world and its movement into cyberspace have caused major psychological, cultural, and, as will be shown below, victimological transformations.

As has been exposed in other publications, cyberspace and psychopathology are two dimensions that feed back into each other and, indeed, "a certain psychopathological symbiosis" sometimes occurs between aggressors and victims (Agustina, 2014; Gassó, Fernández-Cruz, Montiel, Martín-Fumadó, & Agustina, 2018). "What elements of cyberspace lead to this weakening of the psychological barriers that block hidden feelings and needs?" asks Suler (2004, p. 322). Alongside other positive consequences, human beings in the digital era undoubtedly show greater vulnerability. Beyond transhumanism, it is worth focussing on the anthropological changes which technological changes produce in all dimensions of the sphere of human activity: perception, knowledge, learning, communication, interaction, and, ultimately, victimisation.

Miller (2018), when referring to the new field of study dubbed *digital anthropology*, states that greater emphasis in ethnographic analyses should be placed on those forms of digital culture that have become an omnipresent reality, such as social media networks and smartphones. Developing Ortega y Gasset's (1914) original idea, it is now possible to say, with regards to personal identity, that the *I am I and my circumstances* is strongly shaped by dependence on smartphones. And while the Internet was initially celebrated as a medium with unlimited freedom, this expectation has evolved, becoming about total monitoring and vigilance as the residents of the digital panopticon communicate intensively and bare themselves by their own free will (Han, 2014).

This era of full transparency has a major impact on the anthropological, psychological, and criminological study of the human being. As Favero and Theunissen (2018) note, digital technologies are entering anthropologists' lives as a *digital logbook*, in their fieldwork and in all of their activities, shaping how they record, process, analyze, and share their findings (Sanjek & Tratner, 2015). Smartphones have, indeed, contributed to this Copernican turn as they have become an integral part of our day-to-day activities (Collins et al., 2017; Lapenta, 2011; Pink & Hjorth, 2012; Tacchi, Kitner, & Crawford, 2012): with these technologies even being implanted or embedded in the body itself, we are witnessing a progressive crossing between material bodies and mobile digital technologies (Favero, 2016; Ibrahim, 2015; Rettberg, 2014).

The reduction in the age at which people access ITCs over recent years has involved very major changes in minors' day-to-day activities in cyberspace (García, 2017). They have virtual interactions outside the home much earlier and at all times, accessing these interactions with smartphones, which have become not just a window on the world, but also a real expanded space for their victimisation (Montiel & Agustina, 2018).

Cyberspace is undoubtedly a new space for criminal opportunities (Miró, 2012) where children and young people continue to be protagonists, especially in the new forms of social cybercriminality (Miró, 2012), in other words, criminal phenomena which encompass different forms of online interpersonal victimisation, such as cyberbullying, online grooming, and unwanted sexting, which will be discussed below.

Criminological theories provide three decisive focusses in this digital era: the self-control approach (Gottfredson & Hirschi, 1990), the routine activities approach (Cohen & Felson, 1979), and the learning theories (Akers, 1990) among others. In fact, firstly, levels of self-control in the digital era are an individual factor of the first order, which make it possible to defer immediate rewards in a technological context which encourages impulsiveness. The tendency to develop addictive behaviour (for example, relating to compulsive consumption of all sorts of goods and services, including pornography, online gambling, and others) undoubtedly weakens the individual's will and resilience. Secondly, the everyday environment matters:

environmental factors in the form of digital architectures and the design of online spaces that encourage anonymity and a lack of vigilance are factors that create opportunities for misuse, which aggressors use motivated by the limited perceived risk and effort in delinquent behaviour. Human beings' vulnerability largely depends on a lack of controls (*capable guardians* in the terms of the routine activities approach) and the ever greater amount of time young people spend connected, interacting with people they know and with strangers, unaware of the dangers that threaten them or aware of them but with a limited ability to weigh up their possible long-term consequences. Finally, learning theories can also explain how the influence of patterns of behaviour and inadequate models increases, and so negative values and messages about neutralisation of deviant behaviour emerge with great force, transforming the perceptions and values of the collective imagination and adolescent motivation.

2. Cultural criminology and digital adolescents: towards a snapshot of youth culture and strengthening digital resilience

Katz already noted in his famous *Se-
ductions of Crime* (1988) that the central issue when explaining how the decision to commit a crime arises lies in motivation and, specifically, in understanding how a "distinctive sensual dynamics" (p. 4) emerges in the individual who commits it. The true nature of the human being is emotional: attention is sentiment and the conscience is sensual. The challenge when explaining this dynamic which encourages

crime is to determine the steps in the dialectic process through which people empower the world to seduce them to commit a crime. And part of this challenge is discovered when recognising the different sequences in which this spirit of determinism is forged, sequences which are sufficiently subtle for their advances to go unnoticed (Katz, 1988).

If the key to explaining crime is emotional and aesthetic, the messages that should be sent to the *homo sentimental* to dissuade it from the pull of offending should be based on a visual language built by aesthetically underpinned prosocial values. In this sense, from cultural criminology an approach has emerged in recent times where the dimension of the image plays an increasingly central role. In effect, as Herrera notes (2014, p. 6), a new visual criminology is now appearing, with a marked iconic turn: if criminology studies crime, visual criminology would encompass the study of the modes in which the visual interacts with crime, with the two dimensions mutually shaping one another. Its essential objective is to inquire into the “modern visual aesthetic of criminality”, insofar as it is intimately connected to a specific cultural ethic.

The new adolescent culture is a *culture of the image* transformed to unforeseen extremes by the technological setting, taking shape in the *psychology of feedback*, which has resulted in new forms or derivations of psychological disorders like a new digital narcissism or *body dysmorphic disorder* (Aiken, 2016). We have moved from the *Kodak culture*

to the online image and the *Instagram culture* (Gómez, 2012), and the appearance of different labels like *selfitis* and *twitteritis* (Balakrishnan & Griffiths, 2018; Starcevic, Billieux, & Schimmenti, 2018). Users receive pleasurable input of explicit and quantifiable social approval (Sherman, Payton, Hernandez, Greenfield, & Dapretto, 2016; Sherman, Greenfield, Hernandez, & Dapretto, 2018), with unpredictable frequency and size, such as *likes*, *views*, or Google’s search indicators (Loh & Kanai, 2014), which reinforce the behaviour patterns of reward seeking and compulsive behaviour (Knapp, 1976). On the other hand, a growing number of studies have associated addictive behaviour relating to the Internet with changes in reward processing (e.g., Lin, Zhou, Dong, & Du, 2015; Yao et al., 2015), processing of emotions, executive attention, decision making, impulse control (Oliva et al., 2013), and self-control mechanisms (Brand, Young, & Laier, 2014; Greenfield, 2011). We face a *paradox of emancipation* (Silva, 2018): everything points to greater levels of emotional freedom, yet technology effervescence have produced an alarming atrophy of self-control capacities.

Perhaps the time has come to admit that the *digital native* concept is overvalued, as various authors claim (e.g., Kirschner & De Bruyckere, 2017; L’Ecuyer, 2015; Rowlans et al., Nicholas, Williams, Huntington, Fieldhouse, Gunter, & Tenopir, 2008). In this sense, Rowlans et al. (2008) recognise that while young people show great familiarity and technical agility with technology, they also depend too much on search engines and they lack the

critical and analytic skills to be able to understand the value and originality of information on the Internet. Along the same lines, Carr (2011) affirms that digital natives gravitate towards a *superficial* way of processing information, characterised by rapid displacement of attention and minimal reflection.

3. “As you sow, so shall you reap”: vulnerability, risk factors and protection, and new forms of victimisation

The effects of three social revolutions of great importance (the sexual revolution, the digital revolution, and the adolescent revolution), combined with the loss of the sense of privacy (Agustina, 2010 a; Agustina & Gómez-Durán, 2016), , have had a particularly strong impact on digital minors. And so, with socio-cultural conditions conducive to overexposure to different types of risks having been created, new forms of victimisation have quickly appeared.

With this being the case, the different forms of online victimisation have adopted their own characteristics, leading to *new* forms of social criminality, such as cyberbullying, sexting, and online grooming (Miró, 2012). According to recent studies, over 50% of Spain’s adolescent population has suffered at least one of these forms of social cybercriminality (Miró & García, 2014; Montiel, Carbonell, & Pereda, 2016), which can negatively affect young people’s cognitive, neurological, and socio-affective development processes, increasing their risk of developing psychopathological dis-

orders and behavioural problems, and increasing their vulnerability to victimisation in adulthood, as shown by numerous studies into victimisation of minors and polyvictimisation (Finkelhor, 2008; Finkelhor, Ormrod, & Turner, 2007; Finkelhor, Turner, Ormrod, & Hamby, 2009; Pereda, Guilera, & Abad, 2014).

Cyberbullying between minors consists of repeated aggressive behaviour over time, intentionally carried out using electronic devices, with the aim of attacking a victim who cannot easily defend him or herself (Kowalski, Giumetti, Schroeder, & Lattanner, 2014). This is a common phenomenon among young people in Spain and recent research shows that the prevalence between the ages of 12 and 18 is around 30-50% (Calvete, Orue, & Gámez-Guadix, 2016). The invisibility and anonymity of the people involved and spectators, and the disinhibitory effect of this (Suler, 2004), the distance between victim and aggressor (especially emotional), the speed of dissemination of the content and the (near) impossibility of destroying it, the size of the audience, and its omnipresent nature are some of the elements that make this phenomenon an improved and more damaging version of traditional bullying. Harassment can come simultaneously from different channels to which the victim, aggressor, and spectators are constantly connected on different devices, in diverse contexts and situations, and so there are no safe spaces, not even the victim’s own home (Kowalski et al., 2014). All of this not only promotes impulsive and disinhibited behaviour by the (ever more aggressive) perpetrators,

but also facilitates the rapid isolation of the (ever more defenceless) victim and contributes to indefinitely prolonging his or her suffering and making the victimisation chronic (Slonje, Smith, & Frisén, 2013) owing to the great difficulty of escaping and deleting the digital footprint (Montiel, 2016).

Online grooming is behaviour, generally carried out by an adult (or another minor who is significantly older than the victim) through the use of ICTs with the aim of misleading, manipulating, or deceiving a child for future online or offline sexual contact (Gámez-Guadix, Almendros, Calvete, & De Santisteban, 2018). Montiel et al. (2016), based on a sample of 3,897 young people from Spain aged between 12 and 17, observe a prevalence of 17.2%, with a higher rate of victimisation among girls. This increases to 25.6% with girls aged between 16 and 17.

Grooming in itself does not necessarily involve sexual activity, but it does comprise the courting or seduction strategy used by the aggressor to approach minors, catch their attention and interest, seduce them, establish an affective bond with them, and reduce their inhibitions to increase the chance of success when making a sexual approach, as happens in traditional child sexual abuse (Montiel et al., 2016). Nonetheless, even in this process of seduction it is possible to fall back on sexual elements to reduce young people's inhibitions (showing sexual images of other minors or of adults, sexual conversations, etc.). The technological dimension of abuse now facilitates the groomer's

process of preparation (observing and selecting victims, empowering and reinforcing their sexual interest in minors, etc.), as well as finding potential victims (concomitance of victims and settings), establishing a link, progressive sexualisation of the relationship (escalation and making the victim feel jointly responsible), and dissemination or interchange of visual evidence of the abuse (economic or social status gains in paedophile networks) (Gassó, Fernández-Cruz, Montiel, Martín-Fumadó, & Agustina, 2018).

The term *sexting* is a portmanteau of "sex" and "texting", and the different definitions used include sending, receiving, or resending or disseminating sexually explicit messages or images of the protagonists in which they appear naked, semi-naked, or in a sexually suggestive form, with this sharing being done over mobile phones, social media, or the Internet (Agustina & Montiel, 2016). In Spain, 33.5% of adolescents practice sexting. It is most frequent among older adolescents (Villacampa, 2017) and it reaches its highest level among young adults (Gámez-Guadix, Almendros, Borrajo, & Calvete, 2015). Some of the main complexities of this phenomenon revolve around the legal implications of the problem and the variety of content, behaviour, motivations, and media it includes (Drouin, Vogel, Surbey, & Stills, 2013). Also in the significant debate over where to draw the line separating behaviour connected to sexual exploration between peers which can be regarded as normative from other types that are abusive and inappropriate (Livingstone & Smith, 2014), which occur in aggressive or coer-

cive contexts or involve child pornography. Only in these cases can we speak of sexting as a form of interpersonal online violence or a social cybercrime which also could well be the prelude to other cybercrimes such as cyberbullying or online grooming (Agustina & Montiel, 2016).

Although it is important to note that the experience of these online risks does not always carry with it experience of harm (Livingstone, Haddon, Görzig, & Ólafsson, 2011), over half of the victims of cyberbullying (Tsitsika et al., 2014) and at least one in three victims of unwanted online sexual experiences feels negatively affected by these experiences (Ybarra, Mitchell, & Korchmaros, 2011), especially girls, younger children, and people with psychological difficulties (Livingstone & Smith, 2014; Whittle et al., 2013). According to the review by Smith & Livingstone (2017), the predictors for the appearance of harm deriving from experiences of online victimisation primarily refer to three groups: personal factors (sensation seeking, low self-esteem, moral disengagement, and psychological difficulties), social factors (lack of parental support and social standards), and digital factors (online practices or habits, digital skills, vulnerability to the lures of certain websites and services), and the authors suggest that interventions focus on these risk groups which are more vulnerable to mental harm, strengthening their capacity for resilience and coping strategies.

We should not ignore the fact that most of the adolescents involved in any of these

forms of interpersonal online violence are also usually involved in others, giving rise to situations of *multiple online victimisation*, in the case of victims (Montiel et al., 2016), or general dysfunctional patterns of online behaviour in the case of aggressors (Montiel & Carbonell, 2016), and that it is precisely this accumulation of negative experiences and behaviours which contributes to worse psychological and emotional adjustment of the minor (Pereda, Guilera, & Abad, 2014).

Among the factors present in groups of adolescents at risk, alongside certain characteristics of the young people themselves and the virtual space, there is a significant role for having relationships with their parents which are poor, conflictive, lack cohesion, or are negligent. From criminology, the family perspective is that widely held idea that a strong family reduces the existence of crime, while a weak family contributes to it appearing to a greater degree. Sampson has argued in this respect that family life (more than poverty in itself) is the main driving force in generating or avoiding crime. The family perspective fits in well with other common criminological perspectives. A favourable family environment tends to counteract human weaknesses, keeps young people away from unfavourable situations, keeps them away from bad company, from being inactive or idle, from undesirable temptations, risks, and provocations, while at the same time encouraging self-control when it is needed. Furthermore, theories of control tell us that children often fear embarrassing their parents by getting into problems.

Family life also reduces the risk of victimisation (Agustina, 2010 b). In this sense, numerous studies identify family variables such as conflict and a lack of cohesion as predictors of cybervictimisation. For example, with regards to online grooming, Whittle, Hamilton-Giachritsis, Beech, & Collings (2013) note that young people who are marginalised from their families, in conflict with their parents, or who have family difficulties are vulnerable to online sexual approaches (Mitchell, Finkelhor, & Wolak, 2001, 2007; Wells & Mitchell, 2008; Wolak, Finkelhor, & Mitchell, 2004). Based on studies carried out with online groomers, it has been noted that they recognise young people who are looking for attention, empathy, or feedback from adults and they take advantage of these affective deficiencies (Webster et al., 2012; Santisteban & Gámez-Guadix, 2017).

With regards to cyberbullying, parental support is an important protective factor (Wang, Iannotti, & Nansel, 2010), while a poor parent/child relationship is a predictor of online bullying (Ybarra & Mitchell, 2004). For their part, according to Baumgartner, Sumter, Peter, & Valkenburg (2012), adolescents who are involved in risky online sexual behaviour like sexting, are less satisfied with their lives, display higher levels of sensation seeking, come from families with less cohesion and lower levels of education, and use the Internet more to communicate, supporting the idea that adolescents who have problems in their day-to-day lives can fall back on the Internet to substitute the loss of offline gratification (Wolak, Mitchell, & Finkelhor, 2003).

4. The culture of control versus the culture of education: recovering the concept of virtue through the paradigm of self-control

We live in a society obsessed with control and with no tolerance for any type of risk, fixed in a prevention paradigm which does not appropriately understand that, in reality, education of the person and progressive learning in the exercise of a responsible freedom are far more decisive. Neither the state nor the modification of the social and cultural structures that encourages people to lead lifestyles where risks of victimisation are not sufficiently examined can guarantee protection of young people from the dangers of the digital era. External control mechanisms do not permeate the interior of the individual and, although the environment is decisive when shaping spaces for criminal opportunity, it is worth investing more in educating resilient people without ignoring the situational focus or modification of the socio-cultural structures mentioned above.

In this context, understanding the necessary gradualness with which the pedagogy of freedom must be implemented appears to be decisive. Prevention means, above all, education. And education in freedom should involve offering appropriate motivations for young people to see the positive and negative aspects of ITCs and choosing to opt for responsible use of technological resources. In any case, to educate it is necessary to supervise appropriately (Osgood & Anderson, 2004). There are many ways of supervising: it is not just a case of accompanying, although

the mere presence of parents and educators can undoubtedly favour more reflexive and prosocial behavioural dynamics. Some studies have analysed the efficacy of different parental mediation strategies on young people's Internet use, concluding that there is no simple and direct relationship between it and their online experiences. Therefore, merely increasing mediation does not reduce exposure to online risks (Livingstone & Helsper, 2008) and the parental control perceived by the young people only minimally reduces their online risk-taking behaviour (Valcke, De Wever, Van Keer, & Schellens, 2011).

Some authors maintain that parental control does not influence victimisation through cyberbullying (Marcum, Higgins, & Ricketts, 2010; Moore, Guntupalli, & Lee, 2010). Others, however, note that some specific parental supervision strategies can be protective factors, such as supervising time spent on the Internet and sharing of personal information (Ortega-Barón, Buelga, & Cava, 2016; Walrave & Heirman, 2011), while others, such as as monitoring pages they visit online, using filtering software, or the physical location of the computer do not work (Lee & Chae, 2007; Mesch, 2009; Navarro, Serna, Martínez, & Ruiz-Oliva, 2012). The impact of parental control depends, among other things, on how the young people use the Internet (Eynon & Malmberg, 2011) and on how much this type of technology is embedded in their lives (Steeves & Webster, 2008). In the first case, for example, the effect of parental supervision is greater on *active users* (all types of use,

especially social) than on *normative users* (communication, entertainment, and looking for information) and *peripheral users* (limited use of the Internet) than on any other type of user (Eynon & Malmberg, 2011).

Along with the presence of *capable guardians* (Hollis, Felson, & Welsh, 2013) in the surroundings of the day-to-day activities of the young people, it is necessary to construct a communicative language which is effective in the context of the prevention programmes and instruments. And this language which transmits prosocial values, in cyberspace as well, must come from the family as the individual's primary location of socialisation and from other authority figures which contribute to forming the culture of the group or the social culture. The models which are genuinely successful in adolescent culture have a fundamental weight in the configuration of the set of messages favourable or unfavourable to risk practices.

The current crisis of values that afflicts us (libertarian antisocial behaviour, moral detachment or insensitivity, high levels of interpersonal violence, a tendency towards atomising individualist egotism, lack of business ethics, among other symptoms) is a reaction to two problems which feed into each other: a dimming of the *intelligence* to know good and a weakening of the *will* to decide to practice it. In light of the first problem, a return to the concept of virtue and the challenge of making it attractive in educational, political, and social discourse should be proposed; in light

of the second problem, formulas should be proposed for re-strengthening the family structure as the ideal environment for developing the capacity for resilience and self-control. Some dominant lines of thought have placed the emphasis on a concept of *unlimited freedom* (apart from some minimal limits which, in view of the current situation, seem insufficient). Accordingly, a pedagogical model has been favoured, based on a certain self-justifying ethical emotivism. In this context, there should be a return to a positive concept of what it means to educate, which proposes purposefully returning to an emphasis on the importance of self-control as a counterweight to simply allowing oneself to be carried along by a flood of emotions, impulses, and objectives which are gratifying in the short term. The “self-control” construct is more than the contemporary translation of the Aristotelian concept of virtue.

From this perspective, we live in an anomic society where rules only fulfil an external role, of threatening or psychological coercion in the case of deviation. The lack of basic objective references in moral action and in dominant political and social discourse underlines the magnitude of the crisis of values affecting us. A certain existential pessimism stands out among the signs of disquiet of the postmodern individual, the result of a relativism of values which, *prima facie*, was going to bring us freedom and tolerance. This sensation of anguish and anxiety is certainly a paradoxical situation in the period in the history of humankind with the greatest well-being and security. The model of hap-

piness based on compulsive hedonism has only increased the existential vacuum and lack of meaning of a society which, more than ever, is feeling in the dark. Even so, starting from an objective snapshot without euphemisms, efforts should be made to build a promising setting which returns to the family, educational authorities, means of social communication, and political leaders this vital desire to make effective improvements to the conditions for development in order to create responsible citizens.

Starting from these premises, training programmes for parents and educators should be directed towards a new culture in the use of ICTs which advocates a firm commitment to self-control as a counterpoint to the disinhibitory effects described by Suler (2004), empathy and rules for education in cyberspace (*netiquette*), moderation in habits for using the Internet, recovering the sense of privacy, awareness of the negative effects of narcissistic self-referentiality, or people’s awareness of the consequences and the indelible trace of their online behaviour. At a more specific level, prevention of cyberbullying, for example, can focus on general training in empathy, modifying beliefs that support aggression, and establishing more specific guidelines for behaviour on the Internet, including actions which young people can take such as reporting abuse and collecting evidence (Smith & Livingstone, 2017). Prevention of sexting can focus on sexual-affective education and emotional self-regulation, respect for one’s own privacy and that of other people, and training about digital architecture and risks for

online privacy which explain how we lose control of anything we publish online. For its part, preventing online grooming situations can primarily be based on reinforcing parental support and family cohesion, promoting healthy affective relationships which are not coercive or asymmetrical, and developing critical thinking about the hyper-sexualisation of childhood, dismantling all of the false beliefs and fallacies that make it more likely young people will find themselves involved in abusive online relationships (Montiel, Carbonell, & Salom, 2014).

It is important to note that in cyberspace, the victim-aggressor dichotomy is becoming increasingly flexible, and it is even possible to speak of a continuum of involvement in which the figure of the aggressive-victim or the victimised-aggressor often appears (Montiel, 2016; Walrave & Heirman, 2011) as there is enough empirical evidence to support a significant overlap of roles, both online and offline (Kowalski et al., 2014; Smith, 2014). Similarly, we know that children who are vulnerable offline are also vulnerable online, in the same way that people who take risks in one field are more likely to take them in others ones as well (Livingstone & Smith, 2014). Accordingly, from a developmental victimology focus, Pereda et al. (2014) note an increased association between polyvictimisation and victimisation (physical and psychological) by carers, sexual victimisation (especially by unknown adults), and online victimisation (non-sexual cyberbullying and unwanted sexual approaches).

All of this points to the need to adopt environmental and integrated approaches which, instead of focussing on preventing specific behaviour patterns, such as cyberbullying or online grooming or on specific roles (victim or aggressor) or on microsystem levels of analysis (school or family), adopt a broader vision of online victimisation of children and adolescents in which, for many children, digital violence can be a virtually chronic condition of life rather than an isolated experience, which points to the presence of a strong structural root and indicates the existence of a serious endemic problem in current society.

In general, it is necessary to adapt prevention messages to make them suitable for adolescents, increase the degree of warning about risks, and motivate them to reconsider coming into contact with people they do not know online to offset their psychological weaknesses or shortcomings, such as loneliness or depression (Wolak et al., 2004), as well as allowing them to develop their capacity for self-regulation and self-control so they do not succumb to disinhibition, loss of control and freedom online, at the same time as strengthening protective factors that minimise the impact of risks. But to do this, it is necessary to offer them alternative more attractive and exciting spaces for development, ones that are more authentic than screens.

To prevent childhood and youth cyber-victimisation it is not enough to educate in technological skills, since, as L'Ecuyer (2018) notes, true preparation

for using technologies correctly lies in understanding context, which does not develop in a decontextualised setting like the online one, but which is acquired in the offline setting, which is the real world. Neither can it be expected that technological applications themselves will provide a solution to the problem, given that it transcends the digital architecture of cyberspace, and we can be sure that what puts minors at risk is not computers or technology per se, but rather people (Martellozzo, 2013) and we believe that, as Steve Jobs said, “what’s wrong with education cannot be fixed with technology” (Wolf, 1996).

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