Chapter 19
Distance Learning and Social Issues:
Opportunities and Challenges in Preventing Violence

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ABSTRACT

Distance learning (DL) assumes a relevant place in the scope of social sciences' approaches adopted in terms of violence prevention, through the creation and development of digital platforms addressing different types of violence. As a consequence of the wide use of information and communication technologies (ICT) by young people, the risks represented for experiencing violence, and the advantages in terms of the rapid dissemination of information, there has been an increasing use of digital tools to prevent different victimization phenomena. Although there are constraints associated with DL, it has lower costs of learning training per person, allowing a wide dissemination of information. This chapter intends to analyse and discuss how DL may address violence prevention in terms of social sciences issues specific interventions. In the expectation that others may emerge, existing practices in this area covering the most diverse types of violence affecting young people are presented and described.

INTRODUCTION

With the accelerated and growing development of Information and Communication Technologies (ICT), Distance Learning (DL) plays a crucial role in education in general, and entails multiple opportunities and varied challenges (e.g., motivation, autonomy for study and time management) which seems to be in line with the skills of the younger population, also more familiar with this type of technology (Azevedo et al., 2001). In this chapter, DL will be used to describe learning environments primarily involving ICT and/or web-based environments (Guri-Rosenelt, 2009). DL is not restricted to the formal teaching context and has been applied in other areas. It also assumes a prominent and relevant place in the scope of social sciences, specifically in the approaches adopted in terms of violence prevention (VP). The literature has highlighted the positive use of ICT to support and empower victims (Al-Alosi, 2020), considering it as a promising, effective and efficient tool at different levels (Murray et al., 2015), such as: i) disseminating evidence on research on violence and crime, rapidly and with low costs, and assisting practices for professionals whose work is related to victims support; ii) allowing quick access to essential victim support resources and services; iii) setting up online support groups for victims; iv) planning security for dealing with technology-related risks for victims and software programs in connection with support victim agencies (Al-Alosi, 2020; Murray et al., 2015).

There is also a growing research about the relevance that ICT has in promoting violence and cyberviolence. The widespread use of digital tools and internet practices (e.g., text messages, emails, messages through different social networks), particularly by adolescents, to develop or maintain any type of relationship, also triggers additional problems associated with the disinformation about the risk of using these tools. ICT make adolescents more vulnerable to interpersonal intrusiveness, contributing to encourage victimization through cyberstalking (Borrajo, 2020), cyberbullying (Vale, Pereira, & Matos, 2020), sexting (Neves, Forte, Pereira, & Castro, 2020) and digital dating abuse (Caridade & Dinis, 2020 a, b; Caridade, Ataíde, & Dinis, 2020; Burke, Wallen, Vail-Smith, & Knox, 2011), among others.

Considering the mentioned literature evidence, the wide use of ICT by young people, the risks it represents for experiencing violence, but also the advantages it represents in terms of the dissemination and rapid spread of information, there has been an increasing use of these digital tools to prevent many victimization phenomena. Although there are constraints associated with DL, as the ability to limit participants to interact with each other and reduce the opportunities to apply learning objectives to local circumstances, it has been documented that they represent lower costs of learning training per person, resulting in rapid and wide dissemination of information (Hertz, De Vos, Cohen, Davis, & Prothrow-Stith, 2008). To cite some examples, reference can be made to the Continuing Distance Education Course, the Specialization Telecourse in the Area of Domestic Violence against Children and Adolescents (TELELACRI), implemented in Brazil, and which aims to focus on the prevention of domestic violence against children and adolescents, as a distance continuing education modality (Azevedo et al., 2001). Also, the Harvard School of Public Health, the Prevention Institute, and the Education Development Center established, implemented, and assessed Partnerships for Preventing Violence (PPV), a six-part satellite training series taking advantage on the public health approach, aiming to prevent youth violence. Through a hybrid methodology combining satellite training with local, face-to-face (f2f) assistance by trained experts, PPV trained over 13,000 people, accomplishing youth VP activities and creating a unit of youth VP leaders (Hertz et al., 2008). Many other technology-based programmes have emerged in the last years, mainly to address the IPV (e.g., Anderson et al., 2019; Constantino et al., 2015; Glass et al., 2015; Ford-Gilbe et al., 2017; Hegarty et al., 2019; Sabri et al., 2019) and, as happening with f2f

learning environments, online environment initiatives also include aspects as the validity and reliability of assessment, which are critical for achieving desirable outcomes (Gikandi et al., 2011).

This chapter aims to analyse and demonstrate the opportunities and challenges that DL may represent in addressing social sciences issues in terms of interpersonal VP, also encompassing the reliability of online assessment, thus allowing to compare the effectiveness of online learning versus f2f. The concept of violence and the main emerging forms of cyberviolence and f2f violence will be analysed, identifying the leading implications for the well-being of individuals, underlying the continuous commitment to VP and intervention efforts. Existing online prevention practices in this area are also presented and described, in the expectation that others may emerge, covering the most diverse types of violence that daily affect young people. The chapter will end with the discussion of reflections and recommendations for preventive and investigation practices in this field.

BACKGROUND: VIOLENCE AND CYBERVIOLENCE

Violence has been considered as a complex phenomenon resulting from the interaction of multiple factors, e.g., individual, relational, social, cultural and environmental, important to consider in order to achieve an overall holistic understanding of this phenomenon (Dahlberg & Krug, 2006; Saavedra, 2016). For the World Health Organization (WHO) (2002, p. 5), violence involves the "physical force or power, threatened or actual, against oneself, another person, or against a group or community, that either results in or has a high likelihood of resulting in injury, death, psychological harm, maldevelopment or deprivation".

Interpersonal violence (IV), involving violence between individuals, can be subdivided into: intimate and family violence, manifesting itself frequently, but not exclusively, between members of the same family or intimate partners, in the domestic context (e.g., mistreatment of children, mistreatment of elderly people, violence between intimate partners, dating violence) and, community violence, which occurs between unrelated individuals, known or not (e.g., youth violence, occasional violence, sexual violence or rape by strangers) (WHO, 2002). IV, seen as a public health problem (Rossi & Talevi, 2017), may have an impact in different areas, such as in health (physical and mental), criminal justice and social well-being, able to compromise social development (WHO, 2014; Seth & Peshevska, 2014). In particular, it has been shown that the use of IV is an important risk factor for the development of social and health problems throughout life (Rossi & Talevi, 2017), resulting in considerable costs not only in these areas, but also in terms of socio-economic development and other sectors of society (e.g., criminal, civil justice, etc.) (Seth & Peshevska, 2014). Intimate partner violence (IPV) constitutes a type of IV that most affects the well-being of women in particularly, around the world, being necessary to increase the efforts by the scientific community in order to deal with some of the negative and longstanding impacts of IPV (Al-Alosi, 2020).

Despite the most diverse advantages associated with the development of ICT, the rapid spread registered in this area, with the emergence of social media platforms and smartphones, also favoured the emergence of new mechanisms to commit violence and hate speeches. The new forms of violence that have emerged on and through ICT are known by cyberviolence and tend to affect women, girls and sexual and gender minorities in particular (Backe, Lilleston, & McCleary-Sills, 2018; Douglas, Harris, & Dragiewicz, 2019). Examples of cyberviolence could involve cyberstalking (Borrajo, 2020), cyberbullying (Vale et al., 2020), sexting (Neves et al., 2020) and digital dating abuse (Caridade & Dinis, 2020 a, b; Caridade, Ataíde, & Dinis, 2020; Burke et al., 2011). It has been shown that the use of ICT

facilitates manifestations of violence, by enabling perpetrators with new forms of abuse, control, harass, and isolate their victims. Accordingly, understanding how ICT are being misused to facilitate violence perpetration is critical to VP (Al-Alosi, 2020).

Considered as an emerging global phenomenon, cyberviolence may result in serious consequences for public health. In addition to appearing associated with adverse effects on psychological, social and reproductive health (Backe et al., 2018; Bennett et al., 2011; Dick et al., 2014; Ouytsel et al., 2016; Šincek et al., 2017), the literature reports that this type of digital violence is also linked to offline physical, sexual, and psychological violence (Backe et al., 2018; Šincek et al., 2017; Temple et al., 2016; Zweig, Dank, Yahner, & Lachman, 2013). The research also shows that the impact of cyberviolence depends on personal experience, and is greater on victims than on perpetrators (Cassidy, Faucher, & Jackson (2013). It is known that victims of cyberviolence often experience feelings of sadness, hurt, anger, frustration, stress and loneliness, prolonged depression, low self-esteem, social anxiety and emotional and peer problems (Patchin & Hinduja, 2010; Tokunaga, 2010). Cyberviolence has also been identified as a very prevalent phenomena, when compared to traditional violence, as it can occur at any time (Willard, 2006 as cited by Šincek et al., 2017). Although both types of violence share some characteristics, they differ in some aspects: victims of cyberviolence often cannot know who the author is, due to the nature of ICT, resulting in higher levels of anxiety (Šincek et al., 2017). A study on cyberviolence carried out by Šincek et al. (2017) in Croatia with 1,176 participants found that 15% were victims, 13% were authors/victims and 8% were authors of cyberviolence. The perpetrators/victims were the oldest and most often male, and had the lowest grades/academic performance, with girls experiencing more exclusion and gender-based harassment, and also reporting the various negative consequences that this type of abuse has on their reputation and on their relationships with friends. In terms of cyberviolence impact, the same study found that perpetrators/victims had the highest negative outcomes, showing higher levels of depression, anxiety and stress than other groups, as well lower levels of self-esteem.

Conceptualized by the public health model as a preventable problem, the approach to violence and cyberviolence should involve the following aspects: identification of risk and protective factors, development and testing of prevention strategies, and implementation and dissemination of these strategies (Hertz et al., 2008). The literature documents the existence of multiple primary, secondary and tertiary intervention efforts to prevent, control and mitigate the social and health consequences inherent to exposure to IV, mostly of them on conventional f2f interventions (Anderson, McClelland, Krause, Krause, Garcia, & Koss, 2019). Using the technology-based platform in DL is a means of achieving a wider audience and thus allowing: i) monitoring quality and ensuring uniformity of the information provided, ii) training entire teams of a local community, iii) reaching a much larger number of participants and iv) increasing capacity of professionals to reduce violence in their communities (Hertz et al., 2008). Some authors suggested that the use of educational tools to primary intervention may be more easily disseminated over the Internet- and web-based media (Johnson et al., 2018). Tarzia and collaborators (2015) have also recognized web-based interventions for survivors of IPV as an alternative to f2f approaches, allowing to overcome some of the barriers that often interfere with the seek for help.

The disturbing dimension and impact of violence and cyberviolence, drives the need to continue investing in its prevention, and efforts in this domain should seek to make use of the digital resources increasingly used for the rapid dissemination of information, namely attending the DL mechanisms.

POTENTIAL OF DISTANCE LEARNING IN ADDRESSING VIOLENCE PREVENTION

The use of ICT plays an ubiquitous role in involvement and development of social networks and engagement in public life (Douglas et al., 2019), also constituting a means of perpetrating violence. Despite the growing interest of the scientific community in seeking to perceive the emergence of new forms of violence perpetrated through the use of ICT, such as the case of cyberviolence, little attention has been paid to the potential of digital platforms, and of DL in particular, for addressing VP or to support victims of violence. Accordingly, it is important to discuss those that have been the main opportunities, but also the risks and challenges, associated with the use of technology in VP. Examples of VP practices using the available online tools, will be presented and discussed.

Opportunities and Challenges of Distance Learning

The literature has shown that ICT have many potential in addressing VP and providing support to victims of violence, more specifically: disseminating essential victim support resources and services; enabling the creation of online support groups in order to reduce feelings of isolation; providing victims with security devices and providing security plans; collecting and compiling evidence of abuse, disseminating it quickly; and empowering victims (Al-Alosi, 2020).

The use of digital platforms allows immediate access to resources in general and to the local community in particular, underlying privacy and anonymity and allowing the immediate connection of individuals with the mechanisms that provide mobile health technologies (mHealth) (Anderson et al., 2019). It should not be overlooked that victims of IPV are often in a situation of great isolation, as a result of the victimization process by their partners, and with reduced access to social resources (Capaldi, Knoble, & Kim, 2012), and the use of these ICT also provides an important resource for obtaining information or even sharing experiences of violence (Westbrook, 2008 as cited by Anderson et al., 2019). Constantino et al. (2014) study also shows that interventions in online environments make it possible to better deal with social risk and inhibition, reducing them, and promoting the sharing of unwanted thoughts and feelings. DL can also deal with some barriers associated with participating in prevention and f2f training initiatives for professionals, such as travel restrictions and limited funding, which makes attendance at workshops difficult (Runyan, Gunther-Mohr, Orton, Umble, Martin, & Coyne-Beasley, 2005).

In addressing VP, it is also important to incorporate efforts more directed at the offenders or in identifying the risk of offending. It is possible to find some studies that use artificial intelligence (AI) to predict the occurrence of certain types of violence and abuse. Petering et al. (2018) developed a study based in Machine Learning Algorithms, in order to conceive an IPV perpetration triage tool which could be built and implemented to identify young people who are at high-risk for engaging in violence perpetration. Sanchez-Medina, Galvan-Sanchez, and Fernandez-Monroy (2020) also use AI (involving structural equation modelling and ensemble classification tree) to explore personality traits (i.e., psychopathy, machiavellianism and narcissism), more likely to be related to sexual cyberbullying behaviour. The goal will be to find a tool that helps prevent undesirable behaviours in terms of sexual cyberbullying, implementing training activities or prevention actions to promote an organizational culture that avoids any sexual cyberbullying behaviour. Another example of AI application is in crime forecasting, namely, the prevention of recurrent crimes in specific areas or regions, through the analysis of the pattern of occurrence of past crimes. This will assist in the appropriate allocation of resources within a community,

allowing for better police intervention and the provision of useful information to authorities and the design of efficient solutions to crime prevention measures (Nabi, Saeed & Haron, 2020).

Despite the enormous potential of online tools to address violence and support for victims, as well as assessing the risk of offending, it is also important to reflect on the main challenges, understood here as risks, vulnerabilities and barriers, associated to the use of ICT. Despite all the technological progression, there are people who face constraints of diverse order in accessing online tools. Examples are: i) age - older people reveal less ease in handling ICT), ii) geographic location - mostly rural areas, where the Internet signal is generally weaker; iii) economical condition to access the digital devices or, iv) still, the reduced literacy that can interfere with people's will and/or abilities, and victims in particular, to use the technology for seeking help or selecting the most appropriate information for the support they need; v) and finally, the availability, training and practice of professionals working with victims, to adopt the technology and incorporate it in the provision of services, or even the financing options that should be made available for that purpose (Al-Alosi, 2020).

Other problems have been associated with the use of ICT as a resource to support victims of violence. At the level of online counselling and self-help groups, difficulties have been identified in verifying the credentials and identity of service providers, with the risk of victims to access inaccurate information, exposure to uninhibited communication, development of inappropriate online relationships and lack of standards and regulations in the practice of online human services (Finn & Banach, 2000). Another issue involves the fact that ICT can neglect the importance of f2f communication, and, therefore, interfere and/or limit the funding granted to f2f services, which is also crucial in the support provided to victims (Chayn & SafeLives, 2017; Tarzia et al., 2017). There are many concerns with the safety of IPV victims, mainly because the perpetrators can remotely monitor their devices, such as computers, phones and home security systems. While privacy and security should be of paramount importance for all ICT users, these location-based functions are of particular concern to victims of IPV, as they can inform abusers about the victims' location, putting their physical safety at risk (Finn & Atkinson, 2009).

Despite the most varied risks and disadvantages associated with the use of ICT, avoiding and disregarding the potential of technology cannot be the solution. To find strategies or control mechanisms for the most diverse challenges that the use of ICT imposes, is the most important.

Distance Learning in Violence Prevention: Reliability of Practices and Their Impact

Although conventional f2f intervention efforts still prevail, the literature has been documenting an increase in web-based interventions (e.g., webinars; mobile phone technology including e-mail, live video interaction, or mobile app; media/communication platforms such as Facebook, Instagram, and WhatsApp) addressing violence and cyberviolence (Hertz et al., 2008). In this sense, a systematic review developed by Anderson et al. (2019) shows that the mHealth have been progressively increasing, both in terms of prevention, including the prevention of IPV, but also to optimize screening, educational dissemination and links for telehealth care. This systematic review from the same authors found 31 efforts in mHealth interventions, by mobile or other web-based programs, reporting mostly preventive efforts that incorporated secondary and tertiary interventions, which facilitate screening for female victims or encourage women to leave violent relationships, but few involved primary prevention. The majority of studies (67%) analysed in this systematic review involved randomized controlled trials (RCT) or RCT

protocols, showing a consistent interest in testing the efficacy of mHealth for IPV prevention, under controlled conditions and with a variety of victim populations.

In table 1, a number of examples of prevention and intervention efforts developed in the violence field through the use of diverse digital tools are briefly presented and described.

Table 1. Examples of international practices and their reliability involving DL in violence prevention

Practice name/ Authors/ Country	Methodology	Scope/objectives	Target	Reliability Process	Impact/results
● *TELELACRI* (Azevedo et al., 2001) Brazil	● Combined DL with f2f interventions	● To prevent domestic violence against children and adolescents	● Students	● Not available	● Not available
● *PREVENT* (Runyan et al., 2005) USA	● Combination with traditional classroom approaches and online learning	● Addressing and preventing multiple forms of violence, such as: violence against women, sexual violence, child maltreatment, youth violence, and suicide in varied community settings	● Professionals	● Qualitative and quantitative techniques, to assess the training components (process), as well as their impact on individual and organizational change in attitudes, beliefs, and practices	● Participants rated the training to be useful in orienting them to the principles of primary prevention, program planning, and assessment.
● *PPV* (Hertz et al., 2008) USA	● Hybrid model of satellite training with f2f facilitation	● To increase VP knowledge and skills; to develop and enhance leadership capacity of a multidisciplinary network of local leaders working to empower their communities to prevent youth violence	● Professionals in health, justice, and education	● Assess the process of the locally led, national satellite trainings and to inform the development of subsequent broadcasts	● Establishing and maintaining a nationwide network of VP practitioners ● Mobilizing local leaders and communities to take actions tailored to the unique needs and strengths of their communities ● Improving training outcomes for local participants
● *MyPlan* (Alhusen et al., 2015; Bloom et al., 2016; Glass et al., 2015) USA	● "App" - Personalized smartphone application	● To prevent dating violence and limit the long-term negative physical and mental health consequences of IPV	● College-aged women involved in dating relationships, same-sex relationships and survivors' peers	● Use a RCT with two groups: experimental and control group	● The app is a useful, comprehensive, and appropriate way for young people to better understand the realities of DV, assess severity of violence and danger, to provide help and support, to develop a security plan and find appropriate resources
● *isafe* (Koziol-McLain et al., 2015) Australia	● Web-based safety decision aid	● To promote safety planning, improved mental health, reduced violence as well as decreased decisional conflict related to safety in the abusive relationship.	●Survivors women of IPV	●Use a RCT, with two groups: experimental and control group	● Not available

Table 1. Continued

Practice name/ Authors/ Country	Methodology	Scope/objectives	Target	Reliability Process	Impact/results
● *HELPP* (Constantino et al., 2015) USA	● Combined online with f2f interventions	● To compare the effectiveness of the HELPP intervention among IPV survivors.	●Survivors women of IPV	●Use a RCT, with three study groups: online, f2f, and WLC	● The HELPP information and intervention was shown to be feasible, acceptable, and effective among IPV ● The HELPP intervention decreased anxiety, depression, anger, and increased personal and social support in group survivors
● *BSAFER* (Choo et al., 2016) USA	● Web-based and phone call	● To assess the acceptability and feasibility study of BSAFER, a brief Web-based program and booster phone call addressing violence and drug use	● Survivors women of IPV	●Use a RCT, with two groups: intervention and control group	● Overall, estimates of drug use and IPV occurrence demonstrated potential modest improvements in 3-month outcomes in both groups; ● Participants assigned to the BSAFER intervention reported high satisfaction with the program and rated the program favourably in terms of technical usability
● *iCAN Plan 4* (Ford-Gilboe et al., 2017) Australia	●Combined distance learning with f2f interventions	● To assess the effectiveness of the HELPP intervention among IPV survivors	●Survivors women of IPV	● Participants were randomized into three study groups: online, f2f, and WLC	● Not available
● *I-DECIDE* (Hegarty et al., 2019) Australia	● Web-based healthy relationship tool	● To assessed whether an online interactive healthy relationship tool and safety decision aid (I-DECIDE) would increase women's self-efficacy and improve depressive symptoms	● Women involved in intimate relationships	● Use a RCT, with two groups: experimental and control group	● No meaningful differences between groups (intervention and control group) ● Qualitative results indicated that some women find an online tool a helpful source of motivation and support.
● *weWomen and ourCircle* (Sabri et al., 2019) USA	●Web-based intervention	● To test the effectiveness of a web-based safety decision aid/safety planning (myPlan) in reducing abused women's risk for future IPV, and poor mental health and increasing empowerment.	● Immigrant, refugee and indigenous women of IPV	● Use a RCT	● The intervention may not only reduce risk for violence victimization, but empower abused women and improve their mental health outcomes

Note: DL - Distance Learning; f2f - face-to-face; USA – United States of America; PPV – Partnerships for Preventing Violence; RCT - Randomized Controlled Trial; IPV - Intimate Partner Violence; HELPP - Health, Education on Safety, and Legal Support and Resources in IPV Participant Preferred; WLC - Waitlist Control;

The analysis of table 1 allows to identify some of the main characteristics inherent to the practices of VP in DL, more specifically in terms of: i) geographic location, ii) methodology adopted and intended objectives, iii) digital tools involved, iv) target population and type of abuse, and v) assessment and impact of preventive efforts. This will allow to infer important reflections for new efforts to be implemented in this area.

The vast majority ($n = 6$) of the preventive efforts presented in table 1 were developed in the United States of America (USA), three from Australia and an effort was identified in Brazil. A systematic review from Anderson et al. (2019) on mHealth interventions designed for IPV victim concluded that this type of technology-based platform to intervene in IPV is more used in high-income countries, where prevention efforts are most likely to be funded or assessed, either in observational studies, mixed qualitative and quantitative analyses and RCTs.

The use of a hybrid model, combining DL with f2f interventions, was the methodology used by half of the intervention programs presented in table 1, in order to analyse and compare the effectiveness of the two types of intervention. In general, the different efforts try to analyse the potential of ICT in: i) preventing domestic violence with students (Azevedo et al., 2001) and professionals (Runyan et al., 2005); ii) increasing VP knowledge and skills in different professionals (health, justice, and education), that work with victims and provide support to them, in order to highlight successful VP programs intervention (Hertz et al., 2008); iii) preventing dating violence, reducing the long-term negative physical and mental health consequences of IPV, in college-aged women experiencing dating violence (Glass et al., 2015), college women in abusive same-sex relationships (Bloom et al., 2016) and also in dating violence survivors' peers (Alhusen et al., 2015); iv) and as a help resource and support provided to women survivors of IPV (e.g., Constantino et al., 2015; Ford-Gilboe et al., 2017), namely in: reducing abused women's risk for future IPV, and poor mental health and increasing empowerment (Sabri et al., 2019); to increase women's self-efficacy and improve depressive symptoms (Hegarty et al., 2019). A review of the literature on online interventions developed by Rempel et al. (2020) concludes that interventions tend to mainly focus on providing services and resources to support women in a safety planning to leave or prepare to leave an abusive relationship, requiring interventions more focused on supporting women to "move forward" an abusive relationship and analyse the broader social implications related to IPV.

Regarding the digital mechanisms used to achieve these objectives, it is possible to find some variability. In this sense, efforts that use the internet to promote a continuing distance education course (Azevedo et al., 2001) or training practitioners to use evidence-based approaches to the primary prevention of violence and opportunities for networking and technical assistance (Hertz et al., 2008; Runyan et al., 2008), can be found. In effect, victim support services involve different types of professionals (e.g., those providing emergency shelter and a range of other crisis intervention and advocacy services) making specialized training and developing guidelines necessary to work in addressing VP. Technology-based applications have been considered promising and very effective and efficient tools for disseminating information based on research and practices to professionals working in the area of victims' support (Murray et al., 2015). Five of the practices presented in the table 1 consist of websites for victim, such as *isafe, BSAFER, I-DECIDE, HELPP, weWomen and ourCircle*, in order to provide information about existing resources or even help and support in terms of management of the risk of victimization. For example, in the I-DECIDE website, victims could find modules on healthy relationships, abuse and safety, and relationship priority setting, and a tailored action plan, with potential actions for safety and well-being adequate to a woman's top priority (Hegarty et al., 2019). This type of digital platform has been recognized as extremely important and useful in supporting victims. Sorenson et al. (2014) exam-

ined the usability of the Web sites of 261 agencies that serve women victims of violence, concluding that Internet technologies are an essential platform for public health and that they are particularly useful for reaching people with stigmatized health conditions because of the anonymity allowed. Other more interactive practices are also developed, and presented in table 1. These is the case of the iCAN Plan 4 (Ford-Gilboe et al., 2017), where women are engaged in activities designed to increase their awareness of safety risks, reflect on their plans for their relationships and priorities, and create a personalize action plan of strategies and resources for addressing their safety and health concerns. The MyPlan is also an interactive and personalized smartphone application ("App") that could assist college-aged women (18–24 years) experiencing DV, either involved in heterosexual (Bloom et al., 2016) or same-sexual relationship (Glass et al., 2015), as well as supporting friends and family members in learning more about DV and how to best support their friends or family members while keeping themselves safe. It is, therefore, a smartphone-based security decision aid, designed to provide information about how to support a friend in a survivor-centred manner, to identify resources (e.g., contact information about women's centres, police, healthcare providers) and to present personalized safety plan suggestions (e.g., suggestions on topics such as developing a code word or signal for risk, staying safe on campus and at work, and avoiding actions that may escalate the violence) to help a young woman's friend in an abusive relationship (Alhusen et al., 2015; Bloom et al., 2016; Glass et al., 2015.. Considering the risks associated with the use of ICT, some of these practices include security precautions, as is the case of the MyPlan application, mentioned above, to protect survivors and peers of survivors (e.g., users must indicate a discreet name and logo, security information and password protection). This application also has the advantage of being able to be accessed for free on different devices (Apple and Android Smartphones, tablet or computer, via an Internet browser) (Alhusen et al., 2015).

Considering the target population of preventive efforts, the majority ($n = 7$) is directed at victims, female, of violence in intimate relationships, specifically IPV (e.g., Choo et al., 2016; Constantino et al., 2015; Koziol-McLain et al., 2015), followed by the focus on professionals who provide support to this type of victims ($n = 2$) (e.g., Hertz et al., 2008; Runyan et al., 2005). Only one prevention effort involved students (Azevedo et al., 2001). In this sense, the IPV is the type of abuse most addressed by digital tools presented in table 1, which can be understood due to the fact that IPV is the main cause of morbidity and mortality, especially in women, most often victims of this type of abuse (Basile et al., 2011).

In the practices described in table 1, only one did not carry out any type of assessment (Azevedo et al., 2001), six use a RCT with two groups (e.g., Choo et al., 2016; Hegarty et al., 2010; Sabri et al., 2019) and one with three groups (Ford-Gilboe et al., 2017) in the reliability process. However, in three practices, i.e. iCAN Plan, isafe, PPV, (e.g., Ford-Gilboe et al., 2017; Hertz et al., 2008; Koziol-McLain et al., 2015), results on the effectiveness of preventive strategies based on DL are not yet known or available. Practices that include the assessment of the effectiveness of digital tools points to the existence of positive and promising results. For example, in the Health, Education on Safety, and Legal Support and Resources in IPV Participant Preferred (HELPP) intervention, the authors concluded about a decreased anxiety, depression, anger, and an increased personal and social support in the online group; the HELPP information and intervention was shown to be feasible, acceptable, and effective among IPV survivors, when compared with participants in the waitlist group (Constantino et al., 2015). The MyPlan app, a safety decision aid delivered through a smartphone platform, was assessed as constituting a useful, understandable and appropriate way for participants (victims and non-victims) to better understand the realities of DV at different levels: to assess the severity of the violence and the danger in the relationship

of their peers, to reflect on the priorities in providing help and support; to develop a plan for when and where to help and find the right resources (Alhusen et al., 2015; Glass et al., 2015). This application was also assessed favourably by women survivors of same-sex abusive relationships and their friends, considering it a very useful and appropriateness tool in the recognition of abuse or violence, with inclusive disclosure and security strategies, culturally competent and accessible to sexual minority survivors and their friends (Bloom et al., 2016). Even the preventive efforts that found no significative differences between intervention and control groups (Hegarty et al., 2019) or in reduction of risk violence victimization (Sabri et al., 2019), concluded by the positive use of technology as an important and helpful source of motivation and support to women victims of violence, and a way to empower victims and improve their mental health outcomes, respectively. Other practices, i.e. MyPlan, BSAFER, PPV, document the benefits of using digital tools (Alhusen et al., 2015; Bloom et al., 2016; Choo et al., 2016; Glass et al., 2015; Hertz et al., 2005), as well the positive feedback and satisfaction demonstrated by the participants involved in the intervention (e.g., B-SAFER, Choo et al., 2016). The systematic review of Anderson et al. (2019), already mentioned, concluded that web-based approaches to IPV prevention enable risk reduction. The results of the distinct evidence-based interventions demonstrate effective web-mediated access to telehealth services, comprising cognitive behavioural therapy, online support groups for victims, and changes in behavioural expectations through educational programming. However, even though mHealth IPV prevention programming involves less expenditure in terms of human resources by providers, there is limited evidence on whether mHealth interventions effectively addressed the needs of the population, when compared to conventional f2f interventions (Anderson et al., 2019; Marcolino et al., 2018).

Although there is already considerable research in Portugal to characterize the most diverse phenomena involving violence in intimate relationships, and several prevention initiatives at this regard, the vast majority of them are based on a f2f intervention methodology (Caridade & Dinis, 2020c). Nevertheless, it is already possible to find initiatives to disseminate information using a webpage, not only to promote greater awareness of the different types of violence and its implications, but also to stimulate the request for help (e.g., Plan i Association; Portuguese Association for Victim Support (APAV), Women's Association Alternative and Response (UMAR); Government's Commission for Citizenship and Gender Equality (CIG); Interpersonal Violence Prevention Program (PREVINT). PREVINT is a program for the prevention of IV that seeks to sensitize adolescents and adults to the violence that has occurred in the context of interpersonal relationships. For this purpose, it uses a webpage with a visual meter divided in three spectra, with 10 levels in each, entitled "Violentometer" (Barroso, Ramião, & Figueiredo, 2019).

SOLUTIONS AND RECOMMENDATIONS

The literature has shown that ICT plays an omnipresent role in the lives of people in general, increasingly engaged in daily life, also constituting an important resource for many victims of violence to access vital resources and support networks. The use of ICT constitutes a potential mechanism to assist victims, thus highlighting the importance to find strategies that preserve the victims right to safely use this public online space. Thus, and as defended by Al-Alosi (2020), the rejection of the digital devices and/or online presence should not be the solution. It is therefore imperative to find ways to mitigate the risks associated with the use of ICT in order to enhance the safety of victims and promote their ability to access services online. Several strategies have been suggested: i) one of the major concerns to consider

for technology-based interventions will be to attend the safety of victims, providing prevention practices with strategies and/or applications that enhance the protection of victims, such as password-protected sites, "quick exit" buttons on websites, particularly relevant when the victim still resides with the offender (Sorenson, Shi, Zhang, & Xue, 2014); ii) considering the importance that f2f victim support services have, the use of ICT in this area should constitute a complementary strategy to combat violence, thus being necessary to develop financing policies that can increase the type of response given by the services in order to also contemplate the online tools (Chayn & SafeLives, 2017); iii) increase e-literacy skills to minimize the risk of being subject to cyberviolence (e.g., as their awareness of online privacy settings, providing password protection information, locking and filtering software) (Rempel, Donelle, Hall, & Rodger, 2018), are extremely important. In line with this, it has been recommended that online or application-based interventions for VP, specifically IPV, should include the use of social messages to increase acceptance; address security and privacy issues in advance, carefully selecting the content and language used in awareness, and also include support and links to relevant services that can be used in due course (Tarzia et al., 2017).

FUTURE RESEARCH DIRECTIONS

In international literature, it is possible to find several intervention practices involving technology-driven component (e.g., mHealth web-based, site, mobile app) to VP or in identify the risk of violence, using AI, and which obtained promising and encouraging results in terms of risk reduction and the harmful effects of violence, namely in the specific case of IPV (e.g., Constantino et al., 2015). It is therefore important that these online prevention efforts extend to other forms of IV, with has equally negative implications for victims (e.g., bullying, stalking, harassment), being accessible to the minorities and marginalized groups, who generally face more barriers in seeking help within f2f support services. The majority of web-based approaches to VP presented in this chapter included the reliability process with trials, reporting to be possible to obtain positive results. In general, the different efforts allow to conclude for the positive and beneficial use of ICT in the prevention, support and empowerment of victims. The use of AI in predicting the risk of occurrence of violence has emerged as an important, promising tool that deserves to be further explored in future developments in this area of VP.

Focusing on the Portuguese context and although considering the existence of some web-based prevention efforts, there are no known randomized studies that allow comparison of online intervention with f2f efforts in VP. As a result, the conciliation of factors commonly present in victims (e.g., isolation, difficulty in seeking help via f2f for different reasons which may include social stigma, guilt, humiliation, or shame) with the advantages inherent in the use of ICT, make this an important area of further research, specifically the development of new types of online intervention to prevent violence, also including online social media applications, always addressing the reliability process of assessment tools or the impact on reducing the future risk of violence.

CONCLUSION

Violence, either offline or online, is an irrefutable and widely proven reality, with harmful consequences for individual and social well-being. Aiming to be continuously implemented, it is important to find preventive and mitigating efforts in this endemic problem. Additionally, and despite all the discussion around the risks and challenges inherent to the development and dissemination of ICT, extensively presented and systematized in this chapter, the use of digital tools has also been identified as an important strategy to be adopted in addressing VP, and in preventing IPV, in particular.

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KEY TERMS AND DEFINITIONS

Cyberviolence: Violence that occurs by using technology.

Distance Learning (DL): Involving some technology-driven component such as web-based or mobile phone technology including e-mail, live video interaction, or mobile app.

Face-to-Face (F2F) Intervention: Type of conventional intervention, in which professionals contact in person with people/victims.

Information and Communication Technologies (ICT): Referring to technologies that provide access to information through telecommunications, focusing on communication technologies as the Internet, wireless networks, cell phones, and other communication mediums.

Interpersonal Violence (IV): Involving different type of violence between individuals such as intimate and family violence, community violence.

Intimate Partner Violence (IPV): Violence that are perpetrated by intimate partners.

Mobile Health (mHealth): Internet or technology mediated approaches to provision of health resources or interventions.

Reliability: The degree to which an assessment tool produces stable and consistent results.

Violence Prevention (VP): Different types of efforts use to preventing violence.

Web-Based Intervention: The intervention occurs through the use of a web page.