

Youth Cyber Dating Violence: Knowledge Synthesis on the **Effectiveness of Prevention** Programs

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**KNOWLEDGE SYNTHESIS** 



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## **KEY MESSAGES**

Youth dating violence is a concerning issue that has negative effects on the health and wellbeing of its victims. Such violence also occurs online ("youth cyber dating violence") and is an increasingly well documented issue that requires interventions beginning in early adolescence to prevent the escalation and crystallization of violent behaviours in a dating context.

In view of the foregoing, the Direction générale de la santé publique of the Ministère de la Santé et des Services sociaux (MSSS) mandated the Institut national de santé publique du Québec (INSPQ) to identify best practices for preventing youth cyber dating violence. This narrative review aims to describe the effects of prevention programs identified in the scientific literature. It will help guide the development and implementation of preventative measures to take proactive action against youth cyber dating violence.

Seven studies evaluating the effectiveness of six different prevention programs were retained. None of the selected programs has the sole objective of preventing youth cyber dating violence. Their main objectives are to prevent:

- Victimization by and/or perpetration of offline and online violence and dating cyber violence or peer relationships, or
- Victimization associated with the risks that young people may be exposed to online

The modalities of the programs vary, i.e. the number and length of sessions involved, as well as their activities, although they all primarily aim for knowledge acquisition and/or skill building among youth.

Only two studies, evaluating two different programs, measured an effect on cyberviolence perpetration in youth dating relationships. The studies evaluating the effects of the Brief Incremental Theory of Personality (ITP) and Real Talk programs concluded that cyberviolence perpetrated by young people decreased following their participation in the programs. None of the examined programs had effects on cyberviolence victimization.

Four courses of action are proposed to improve practices and prevention programs:

- 1. Consider the continuum between offline violence and cyber dating violence by acting on the risk and protective factors common to both.
- 2. Develop initiatives that include components aimed at reaching out to various environments frequented by young people.
- 3. Provide facilitators with adequate training that targets issues related to youth cyber dating violence and actively involve young people in the implementation of interventions.
- 4. Integrate both knowledge acquisition and skill building activities into prevention programs.

## **SUMMARY**

#### Background

Violence in youth dating relationships is a concerning public health issue. It affects a significant number of young people and negatively impacts the health and well-being of its victims. Young people's increasing use of technologies means that violent behaviours now occur via social media, messaging services, cell phones, and other technological devices. Youth cyber dating violence, defined as the use of these technological means to control, monitor, or harass a partner or ex-partner, is prevalent in the adolescent population and becoming increasingly well-known. The characteristics that distinguish cyberviolence from "offline" violence, such as its lack of temporal, physical, and geographical limits, underscore the importance of examining this type of violence specifically to better understand the issues associated with it. It is therefore essential to document the practices that aim to prevent youth cyber dating violence in order to determine their effectiveness and issue recommendations based on current knowledge that will contribute to their improvement.

#### **Objectives**

The objective of this synthesis is to report on the state of knowledge regarding the prevention of youth cyber dating violence in order to guide preventative measures to take proactive action against it. More specifically, this synthesis aims to:

- Document the programs that specifically aim to prevent youth cyber dating violence and report on their effectiveness.
- Propose courses of action to improve the prevention of youth cyber dating violence based on the findings of the selected studies and in the light of the best documented practices for preventing youth dating violence.

#### Methodology

This synthesis uses a systematized narrative review of the literature. Based on the established criteria, seven studies were selected and an in-depth analysis of their content was conducted. An extraction grid was used to compile the data from each study: the objectives of the program analyzed, the program's structure (activities, facilitators involved, facilitator training), the sample (composition, measurement time, control group), the measurements used to assess the program's impacts on youth cyber dating violence, and the results of the study.

#### Results

The seven studies selected examine a total of six different prevention programs that include a component on youth cyber dating violence. No program had the sole objective of preventing cyberviolence. The results of the selected studies revealed that only two of the six programs help reduce cyberviolence perpetration and that no program had an effect on cyberviolence victimization by young people following their participation in the programs. The authors of the study evaluating the effects of the Brief ITP program, which aims to prevent perpetration and victimization in youth dating relationships through a brief group intervention in schools, concluded that the program helped reduce the frequency of cyberviolence perpetration and offline violence committed against a partner or ex-partner for up to one year following the intervention. As for the Real Talk program, which, through a brief, personalized, one-on-one intervention, aims to prevent the perpetration of violence by young people who have previously committed a violent act against a partner, the authors also concluded that there was a decrease in the frequency of cyber-aggressions committed in young people's dating relationships for three months after the program. However, a single question measured these behaviours, and it addressed only online monitoring behaviours. Although only two programs had significant impacts on cyberviolence, the results of the other selected studies nonetheless suggest that some programs may reduce other forms of violence in addition to changing attitudes or perpetration or victimization behaviours related to youth cyber dating violence.

The study evaluating the effects of the DARSI school-based prevention program, intended to prevent the perpetration of offline and online violence by youth in their relationships with peers and with intimate partners, shows a decrease in the perpetration of offline and online violence between peers. The results also show reduced adherence to sexist attitudes and beliefs in myths about romantic love. According to the evaluation of two studies, the Dat-e Adolescence program, which is another school-based program intended to prevent perpetration and victimization of offline and online violence in the context of intimate relationships, helps reduce adherence to beliefs in myths about romantic love (e.g., that jealousy is a sign of love, that love conquers all), while improving the self-esteem and emotional regulation skills of the youth who participated. It also reduces serious perpetration and victimization of physical violence, perpetration and victimization of sexual violence, and victimization of bullying in dating contexts. The evaluation of the Date SMART (Skills to Manage Aggression in Relationships for Teens) program, whose objectives include preventing perpetration and victimization of offline and online violence in dating relationships through a group intervention, also notes a reduction in perpetration and victimization of sexual violence by adolescent girls who had previously been exposed to violence in a dating context. The results of the evaluation of Safety.net, which is the only program of those identified that prevents victimization associated with the various risks that young people are exposed to online, shows that the program has a buffering effect, mitigating the natural increase of reported experiences of victimization associated with cyberbullying, online grooming, problematic internet use, and video game and smartphone addiction.

#### Findings and courses of action

Four main findings were identified from the results of the studies evaluating the six cyberviolence prevention programs. Based on these findings and literature on youth dating violence prevention, courses of action have been proposed to improve the practices and programs for preventing youth cyber dating violence.

**Finding No. 1**: Youth cyber dating violence prevention is generally integrated in youth dating violence prevention programs.

**Course of action No. 1**: Consider the continuum between offline violence and cyber dating violence by acting on the risk and protective factors common to both.

Youth cyber dating violence prevention initiatives must consider the continuum between offline violence—between peers or intimate partners—and cyber dating violence. These two forms of violence have a high degree of co-occurrence and a number of shared risk and protective factors on which action can be taken. For example, by acting on the attitudes that normalize violence, such as sexist attitudes and beliefs in myths about romantic love, and on emotional regulation skills, it may be possible to reduce the risks of both online and offline violence perpetration and victimization in dating relationships.

Finding No. 2: The evaluated programs only target youth on an individual basis.

**Course of action No. 2:** Develop initiatives that include components aimed at reaching out to various environments frequented by young people.

While the prevention programs with demonstrated effects on cyberviolence included in this synthesis only target individual factors, the scientific literature on violence prevention underscores the importance of also taking action in everyday environments—at home, at school, and in the community—to proactively prevent problematic behaviour. Interventions more broadly targeting everyday environments should therefore be developed and integrated into existing youth cyber dating violence prevention programs. For example, the documented protective factors, such as parental involvement and supervision, family cohesiveness, a sense of belonging in school, involvement in one's school, teacher support, and a feeling of safety in one's community should be considered when developing interventions for these environments.

**Finding No. 3**: The intervention facilitators have a range of professional backgrounds and receive varied training.

**Course of action No. 3**: Provide facilitators with adequate training that targets issues related to youth cyber dating violence and actively involve young people in the implementation of interventions.

Given the diversity of training and skills among the facilitators carrying out violence prevention programs, it is important to provide them with training that includes a specific component on youth cyber dating violence issues, whether or not the program targets only this type of violence. It would also be relevant to give facilitators access to ongoing training and the option to practice implementing the program. One promising avenue to consider is to involve students as facilitators (or peer educators) in the program, which could help the intervention be positively received, and its prevention messages be better internalized by students participating in the program, as the preventative messages would be coming from peers with whom the students better identify.

**Finding No. 4**: The programs' activities combine two main intervention methods: knowledge acquisition and skill building.

**Course of action No. 4:** Integrate both knowledge acquisition and skill building activities into prevention programs.

While the activities designed for knowledge acquisition are essential, the scientific literature on violence prevention highlights the importance of including activities for youth to develop and apply skills that will help them reduce their violent behaviours in a dating context. Acquiring knowledge on the forms and consequences of dating violence, sexist attitudes, beliefs in myths about romantic love, and the risks of communication technologies is useful for educating youth. This knowledge, however, is insufficient to cause lasting changes to behaviour. For this reason, to prevent youth dating violence both online and offline, it seems advisable to integrate intervention methods that aim to help young people develop and practice a number of skills. Improving their communication and problem-solving skills, developing healthy conflict resolution skills, and promoting the use of strategies to reduce their aggression, adopt healthy habits toward partners, and control their personal information on social media are all examples of skills to develop in young people in the interest of preventing violence.

## **1** INTRODUCTION

Youth dating violence is a concerning public health issue (World Health Organization, 2017 [see Organisation mondiale de la santé in References]). As documented by many studies, this issue can have numerous consequences on the health and well-being of its victims, such as depression, excessive drug and alcohol use, symptoms of post-traumatic stress, suicidal ideation, social and school adjustment problems, and an increased risk of being a victim of domestic violence in adulthood (Banyard and Cross, 2008; Chiodo et al., 2012; Devries et al., 2013; Exner-Cortens et al., 2013; Hébert et al., 2019; Ramiro-Sánchez et al., 2018). Defined by the WHO as "any behaviour within an intimate relationship that causes physical, psychological, or sexual harm to those in the relationship," (Krug et al., 2002) intimate partner violence refers to any form of violence (physical, psychological, or sexual) experienced in a dating relationship (Hébert et al., 2018). Among the youth surveyed in the latest Québec Health Survey of High School Students, 2016-2017, more than one third (36%) who had been in a dating relationship in the last year indicated that they have been the victim of violence (physical, psychological, or sexual) in a dating relationship and one quarter (25%) reported having perpetrated violence in a dating relationship (Traoré et al., 2018). The survey, however, does not document all violent behaviours in a dating context that can occur online, despite the undeniable growing presence of technology in the lives of young people.

The use of digital tools has in fact become an inevitable means of communication in young people's social relationships, including their dating relationships. Youth dating violence into cyberspace, although relatively new, has already been well documented. In Québec, a study conducted among high school students reported that 35.8% of the respondents had been victims of cyber dating violence in the 12 months preceding the survey, 33% had committed such violence, and 27.2% had experienced mutual cyberviolence in their dating relationship (Smith et al., 2018). Like other forms of violence in intimate relationships, cyber dating violence often starts from one's first dating relationships. On the basis of this finding, many experts advocate for early interventions beginning in early adolescence to prevent the escalation and crystallization of violent online behaviours in a dating context (Fernet et al., 2022).

In view of this, the Direction générale de la santé publique of the MSSS mandated the INSPQ to produce a knowledge synthesis on best practices for preventing youth cyber dating violence. The objective of this synthesis, which is based on an analysis of studies that evaluate programs for preventing youth cyber dating violence<sup>1</sup>, is to describe the state of knowledge on youth

<sup>&</sup>lt;sup>1</sup> Many violence and youth cyber dating violence prevention programs have been implemented but not evaluated, which significantly limits the number of available studies. There are numerous inherent limitations to studies evaluating this type of program that should be considered when interpreting their results, such as the use of self-reported data, the often unevaluated social desirability bias of participants responding to surveys within the framework of their studies, the sampling methods, and the frequent absence of long-term follow-up (Cornelius and Resseguie, 2007).

cyber dating violence prevention and to guide the development and implementation of proactive preventative measures against it.

This synthesis is divided into four sections. The first section provides background, defines the concepts used in this work, and presents the consequences of youth cyber dating violence on health and well-being. The prevalence of violence in youth dating relationships in general, and cyberviolence in youth dating relationships specifically, is also addressed, followed by cyberviolence prevention issues from a public health perspective. The second section details the objectives of this synthesis and the methodology used. The results of the analysis of the evaluation studies of programs with a component intended to prevent youth cyber dating violence are then presented. Then, the discussion presents the main findings of this synthesis, proposes courses of action to improve youth cyber dating violence prevention, and highlights the strengths and limitations of this synthesis.

## 2 BACKGROUND

## 2.1 Definitions and consequences of youth cyber dating violence

While technology use has positive effects on adolescent socialization, it also makes adolescents more vulnerable to interpersonal intrusion and can potentially expose them to negative experiences like cyberbullying and cyber dating violence (Pujazon-Zazik and Park, 2010). A number of researchers who examine cyberviolence in dating relationships consider it to fall on a continuum with offline violence although it has its own specific aspects (Caridade et al., 2019; Korchmaros et al., 2013; Van Ouytsel et al., 2016; Zweig et al., 2014). The absence of temporal, geographical, and physical limits, the speed of communications, the time elapsed between exchanges in a conversation, and the lack of emotional and physical cues are characteristics specific to cyberviolence that require consideration in preventative efforts (Bennett et al., 2011; Stonard et al., 2014; Van Ouytsel et al., 2016).

Cyber dating violence is generally defined as a form of control, monitoring, and harassment by a partner or ex-partner that can include various forms of violent behaviours or pressure enacted through online interactions (INSPQ, 2018; also see Zweig et al., 2014). More specifically, as underlined by Caridade and colleagues in a review of the literature summarizing the state of knowledge on cyber dating violence, this type of violence can take the form of daily control or monitoring of a partner or ex-partner through social media; the sending or posting of abusive, threatening, or humiliating comments on social media or by email; the posting of photos or videos on social media intended to humiliate or harm a partner or ex-partner; or location tracking or the unauthorized use of the partner's or ex-partner's passwords in order to spy on or control them (Caridade et al., 2019). In this regard, cyber dating violence is often described as multifaceted and comprised of different typologies of violent behaviours including online controlling behaviors and cyberstalking (e.g., the need to know where one's partner is and who they are with at all times), cyber harassment (e.g., repeated and insidious calls or text messages), cyber verbal and psychological violence (e.g., insults, threats, and humiliations), and cyber sexual violence (e.g., pressuring someone to send intimate photos, threatening to share intimate images) (Gámez-Guadix et al., 2018; Watkins et al., 2018).

Cyber dating violence is frequently associated with "offline" dating violence (e.g., physical, psychological, and sexual violence); both are considered risk factors that influence the occurrence of the other (Borrajo et al., 2015; Temple et al., 2016; Yahner et al., 2015). Despite their similarities, cyberviolence is defined by specific violent behaviours and has distinct consequences on the health and well-being of the victims. In addition to the aforementioned consequences of dating violence including depression, excessive drug and alcohol use, symptoms of post-traumatic stress, suicidal ideation, social and school adjustment problems, and an increased risk of being a victim of domestic violence in adulthood (Banyard and Cross, 2008; Chiodo et al., 2012; Devries et al., 2013; Exner-Cortens et al., 2013; Hébert et al., 2017;

Ramiro-Sánchez et al., 2018), victims of youth cyber dating violence can also suffer consequences specific to this form of violence. They are generally exposed to greater public humiliation, can have more difficulty escaping violent behaviours—due to the easy and ongoing access to technology for the abuser who may feel uninhibited online—, and can feel more isolated in addition to suffering from insecurity (Cava et al., 2020; Ellyson et al., 2021; Hancock et al., 2017; Van Ouytsel et al., 2016; Zweig et al., 2014). As cyber dating violence is often experienced in co-occurrence with other forms of violence, it can only exacerbate the consequences of this violence on the health and well-being of the victim.

## 2.2 Prevalence of youth cyber dating violence

In Québec, the statistics on youth cyber dating violence mainly come from the Québec Health Survey of High School Students. The most recent survey reveals that victimization (psychological, physical, and sexual) in the dating relationships of young people who reported having had a dating relationship in the preceding 12 months has increased in recent years from 30% in 2010–2011 to 36% in 2016–2017. As for perpetration, the proportions of youth who reported having perpetrated psychological violence (18%) or sexual violence (3%) remained stable from 2010–2011 to 2016–2017, while the proportion of youth who reported having committed physical violence decreased from 13% to 11% (Traoré et al., 2018). According to another Québec-based survey, *Parcours Amoureux des Jeunes*, for which the data was collected in 2011 and 2012, nearly half of the 14- to 18-year-olds who reported having been in a dating relationship in the preceding 12 months had been victims of at least one violent episode during that time, with girls (63%) reporting higher prevalence than boys (49.5%) (Hébert et al., 2017)<sup>2</sup>. These surveys, however, do not document violent dating behaviours that occur online, even though youth increasingly use communication technologies on a daily basis to develop and maintain their dating relationships (Burke et al., 2011).

In Québec, nearly half (49%) of high school-aged youth report spending a daily average of two or more hours chatting, texting, browsing the internet, and playing video games on weekdays outside of school hours, with the prevalence increasing to 65% on the weekend (Traoré et al., 2021). A recent survey on families' digital practices reported that 60% of Québec youth aged 13 to 17 spend over 10 hours a week on the internet and that 92% of young people in this age group have an email address or a personal profile on a social media site like Facebook, Twitter, or Instagram (Académie de la transformation numérique, 2021). While the technologies used to commit a form of cyberviolence in a dating context vary, the most commonly used means are social media and messaging applications like text messages and email (Baker and Carreno, 2016;

<sup>&</sup>lt;sup>2</sup> The gap in prevalence is mainly due to the age differences of the two surveys' participants, as the Québec Health Survey of High School Students included youth of all high school ages while the *Parcours Amoureux des Jeunes* only included youth from Secondary 3 to Secondary 5. Furthermore, the questions measuring the types of violence differed between the surveys; *Parcours Amoureux des Jeunes* covered a wider range of violent acts, such as threatening behaviours between dating partners.

Ellyson et al., 2021; Lara et al., 2020; Muñoz-Fernández and Sánchez-Jiménez, 2020; Stonard et al., 2014). Risky and improper use of these technologies on a daily basis over a long period of time can thus expose young people to more experiences with cyber dating violence. Such risky use of technology can translate to both self-regulation problems, such as compulsive internet use and feelings of unease when offline, and a preference for social interactions and conflict resolution online (Machimbarrena et al., 2019). These characteristics specific to online relationships in which violent behaviours can occur support the relevance of focusing specifically on this type of violence, especially among youth.

The prevalence of youth cyber dating violence varies widely between studies. A recent Canadian study conducted in 2017 and 2018 on youth in the third and fourth years of secondary school who had been in a relationship or dated in the preceding 12 months revealed that 17.5% of young people reported having been the victim of cyberviolence in the last year. This was the second most prevalent form of experienced violence, the first being offline psychological violence which had been experienced by 28% of the young people in the sample. Although the guestion included numerous types of behaviours that can occur on social media, the provided examples were not exhaustive<sup>3</sup>. The prevalence of young people who reported having committed cyberviolence in this study was 8% (Exner-Cortens et al., 2021). Other studies reveal a higher prevalence of victimization and estimate that 28% to 73% of youth aged 12 to 18 who had been in a dating relationship in the six to 18 months preceding the survey reported having experienced at least one incidence of cyberviolence in their dating relationships in the preceding 12 months (Cutbush et al., 2021; Hinduja and Patchin, 2021; Smith et al., 2018; Stonard, 2021). This figure stands between 32% and 50% for the perpetration of cyberviolence (Cutbush et al., 2021; Muñoz-Fernández and Sánchez-Jiménez, 2020; Smith et al., 2018; Stonard, 2021). For the prevalence of youth cyber dating violence victimization and perpetration, the studies reveal that between 27% and 49% of youth aged 12 to 18 who had been in a dating relationship in the last 12 months reported having experienced and perpetrated at least one instance of cyber dating violence in the last year (Smith et al., 2018; Stonard, 2021).

There is no consensus among the studies on the prevalence of cyberviolence victimization and perpetration in youth dating relationships by gender (Caridade et al., 2019). Some studies report similar proportions by gender (e.g., girls and boys reported having equally perpetrated and experienced instances of cyberviolence in their dating relationships) (Lachapelle et al., 2021; Lara et al., 2020; Smith et al., 2018), while others report that boys are more likely to perpetrate cyberviolence than experiencing it (Cutbush et al., 2021; Hinduja and Patchin, 2021; Stonard et al., 2014; Stonard, 2021; Zweig et al., 2014). For forms of cyberviolence victimization, multiple studies reveal that girls report experiencing cyber sexual violence in their dating relationships

<sup>&</sup>lt;sup>3</sup> Only one question measured cyberviolence in this study. The participants had to indicate whether someone they were dating or in a relationship with had used social media to hurt, embarrass, or monitor them. The question therefore neither considers all technological means that can be used to commit violent behaviours (e.g., email, cell phones), nor all its possible forms (e.g., harassment, control, cyber sexual violence).

more often than boys do, although the prevalence varies by study (between 14% and 46% for girls and 7% and 30% for boys) (Dick et al., 2014; Ellyson et al., 2021; Reed et al., 2017; Stonard, 2021; Zweig et al., 2014). Finally, the results of the Canadian study demonstrate that non-binary youth report having been the victim of cyberviolence at a higher rate (33%) and are three times more likely to have perpetrated this type of violence in the preceding 12 months (21.8%) (Exner-Cortens et al., 2021). The significant variation in prevalence of cyber dating violence across these studies is mainly due to differences in the methodology used—that is, the definition of cyberviolence used, the measurements used, the phrasing of the questions (Caridade et al., 2019; Stonard et al., 2014), the location of the study, and the sociodemographic characteristics of the sample (Hinduja and Patchin, 2021; Zweig et al., 2014).

### 2.3 Cyberviolence prevention and public health

As youth cyber dating violence is a relatively new social issue, the scientific knowledge on its prevention is still underdeveloped. Furthermore, the literature on youth cyber dating violence seems to have mainly developed through being included in the youth dating violence prevention literature. The scientific literature on preventing this form of violence suggests that, to counter it, interventions developed through concerted and complementary efforts at different levels of the ecological model<sup>4</sup> should be deployed and implemented in ideal conditions (degree, duration) (Hébert et al., 2018).

No factor alone can explain why some people commit acts of violence toward others or why violence is more present in certain environments (Krug et al., 2002). From a public health perspective, violence most often results from a complex interaction between different individual factors (the characteristics of a person), relational factors (the relationships between a person and those around them), community factors (the characteristics of the various settings in which a person lives), and societal factors (the social and cultural context in which a person develops) (Krug et al., 2002). To effectively prevent violence in youth dating relationships, it is therefore necessary to take proactive action against violence by developing a wide range of interventions that aim to prevent different forms of violence (physical, psychological, sexual, etc.), that use various methods (new technologies, in-school interventions, etc.), and that target various populations (people who have been witness to violence in intimate relationships, the general public, vulnerable populations, etc.). Interventions rolled out in the form of prevention programs

<sup>&</sup>lt;sup>4</sup> "The ecological model, which organizes the factors associated with violence into four categories, can help us better understand the causes and consequences of violence. The first level considers the influence of factors related to the individual's personal characteristics on the occurrence of violence. The second level of factors examines the influence of close or proximal social relationships, meaning ties with family members, dating partners, friends, or peers, and the consequences of these factors on individual and family trajectories. The third level, the community level, focuses on the influence of the characteristics of the contexts and environments (school, sports, neighbourhood, workplace) in which the social relationships occur. The final level takes into account the influence of the society's characteristics (e.g., cultural and social norms, legislation, inequalities) on the adoption of violent behaviours. Finally, the temporal or historical factor (time) surrounds the other levels of the model" (Laforest et al., 2018).

may interrupt young people's trajectories of violence and change their knowledge on and attitudes toward violence in intimate relationships, ultimately creating changes in their behaviour (De la Rue et al., 2017; Hébert et al., 2018). The main findings of this knowledge synthesis and the proposed courses of action to improve youth cyber dating violence prevention will be discussed from this public health perspective.

## **3 OBJECTIVES AND METHODS**

## 3.1 Objectives

The general objective of this synthesis is to describe the state of knowledge on youth cyber dating violence prevention and to guide proactive preventative measures against it.

More specifically, this project aims to:

- Document the programs that specifically aim to prevent youth cyber dating violence and report on their effectiveness.
- Propose courses of action to improve the prevention of youth cyber dating violence based on the findings of the selected studies and best practices for preventing youth dating violence.

## 3.2 Methodology

This synthesis is based on a systematic narrative review of the scientific literature. It was carried out in the following stages: 1) formulation of the general and specific research objectives, 2) development and application of a literature review strategy, 3) formulation and application of inclusion and exclusion criteria for article selection, 4) standardized assessment of the quality and scientific rigour of the selected articles, 5) systematic extraction of the results using a predefined grid, and 6) analysis of the included articles (Snyder, 2019; Saracci et al., 2019).

## 3.2.1 Literature review and assessment of the articles' quality and scientific rigour

The follow databases were searched on July 29, 2021: Medline (Ovid), PsycINFO (Ovid), ERIC (ESBCO), Health Policy Reference Center (EBSCO), Political Science Complete (ESBCO), Public Affairs Index (ESBCO), Psychology & Behavioral Sciences Collection (ESBCO), and SocINDEX (ESBCO), without geographical limits and using key words derived from the concepts of study: "online", "violence", "romantic relationship", "adolescents", etc. The complete research strategy is presented in appendix 1.

A review of the grey literature was conducted to supplement the database reviews. A number of sources from the grey literature were used, including Google and OPHLA (Ontario Public Health Libraries Association) search engines, the Santécom databases, the CUBIQ (Catalogue Unifié des Bibliothèques Gouvernementales du Québec) catalogue, and specific sources such as the Centers for Disease Control and Prevention, the World Health Organization, the Interdisciplinary Research Centre on Intimate Relationship Problems and Sexual Abuse, the Promoting Relationships and Eliminating Violence Network, and the Association québécoise Plaidoyer-Victimes. No grey literature was selected. The detailed strategy for the grey literature review is presented in appendix 1.

The literature review strategy used in this knowledge synthesis, for both the scientific and grey literature, was developed with the assistance of an INSPQ librarian.

After the removal of duplicates, 503 articles were identified in the databases and one through Google. To be included in the synthesis, the articles needed to be published between 2011 and 2021, have been written in French or English, come from member countries of the Organisation for Economic Co-operation and Development (OECD), have evaluated one or more programs with a component on preventing youth cyber dating violence, involve youth aged 12 to 17, and have been peer reviewed. In accordance with the exclusion criteria, 486 articles were excluded. Seventeen articles were assessed for their quality and scientific rigour. This assessment was made using checklists from the Critical Appraisal Skills Programme (CASP) (see appendix 2). Of the 17 articles evaluated, 10 were rejected for not addressing the content sought for this synthesis, presenting only risk and protective factors, or for poor quality. In total, seven articles discussing six programs with a youth cyber dating violence prevention component were analyzed in depth. The literature review flow chart is presented in appendix 3.

No studies evaluating programs for preventing youth cyber dating violence focused exclusively on the population of study: youth aged 12 to 17. Articles on youth aged 11 to 19, which thus include the population of study, were therefore selected.

### 3.2.2 Summary and analysis of the scientific literature

An extraction grid was used to summarize the selected articles by compiling the data from each: the programs' general and specific objectives, program activities and intervention methods, profile of facilitators tasked with deploying the programs and facilitator training, methodology used, characteristics of the study, system for recruiting participants, sample composition, measurements, and indicators used to assess the programs' impact on youth cyber dating violence. This information was compiled in a summary table, which is presented in appendix 4, in order to analyze the various program components and their effects, as well as to determine the findings of the identified studies in order to use them to propose courses of action for improving youth cyber dating violence prevention.

### 3.2.3 Peer review process

In compliance with the INSPQ's *Cadre de référence sur la révision par les pairs des publications scientifiques* [Reference framework for the peer review of scientific articles] (Robert and Déry, 2020), a pre-final version of the synthesis was submitted to two external reviewers in academia. Working from the institute's review table (Robert and Déry, 2020), the reviewers were asked to validate the accuracy of the content of the synthesis, the pertinence of the methods used, and the appropriateness of the findings and courses of action proposed. The project team then developed a table listing all the comments they received, whether they were accepted or not and why, and the adjustments made to produce the final version.

## 4 RESULTS

This synthesis of knowledge identified seven studies—all published scientific articles—that assess the effectiveness of a total of six intervention programs that include a component designed to prevent youth cyber dating violence. The authors of three of the evaluation studies also developed the program evaluated therein<sup>5</sup>: Brief Incremental Theory of Personality (ITP), Real Talk, and Date SMART (Skills to Manage Aggression in Relationships for Teens). The three other programs—namely, Safety.net, Dat-e Adolescence, and DARSI (Developing Healthy and Egalitarian Adolescent Relationships)—were not developed by the authors of the identified studies. While the selected studies provide little detail on the conditions in which each program was implemented, its activities, and the impression of the training and program among those involved, the information provided by the evaluating studies on each program is summarized in table 1 (see the complete table in appendix 4).

<sup>&</sup>lt;sup>5</sup> To learn more about the inherent limitations of the selected studies, refer to section <u>5.2 Strengths and limitations</u>.

Table	1
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## Overview summary of the selected programs and studies

Authors	Program evaluated	Program's general objectives	Program structure	Study characteristics	Results
Fernàndez- Gonzàlez et al., 2020		violence in youth cyber dating violence Act to prevent perpetration and victimization	<ul> <li>Brief group intervention in a school setting</li> <li>Program activities:</li> <li>One 1-hour session based on implicit personality theory with 3 parts: reading scientific studies, reading excerpts supposedly written by older students from their school, and writing a description of a difficult situation</li> </ul>	Sample: 123 students	<ul> <li>Impact on the perpetration of youth cyber dating violence:</li> <li>↓ in cyberviolence perpetration (6 months and 1 year after the intervention)</li> <li>↓ in offline violence perpetration (6 months and 1 year after the intervention)</li> <li>No effect on victimization</li> </ul>
Rothman et al., 2020	Real Talk	<ol> <li>Prevent the perpetration of offline and online violence in youth cyber dating violence of youth (aged 15 to 19) among individuals who have previously committed a violent act against a partner</li> <li>Act to prevent perpetration</li> </ol>	<ul> <li>Brief, personalized, one-on-one intervention</li> <li>Program activities:</li> <li>One 30- to 45-minute motivational interviewing-style session with follow-up booster sessions</li> </ul>	<ul> <li>Country: United States</li> <li>Sample: 172 youth aged 15 to 19 (who had committed a violent act toward a partner in the preceding 3 months)</li> <li>Measurement periods: 3 (pre- test, 3 months after, and 6 months after the program)</li> <li>Control group: 1 (information booklet and list of resources)</li> </ul>	<ul> <li>Impact on the perpetration of youth cyber dating violence:</li> <li>↓ in cyber dating violence perpetration after 3 months</li> <li>↓ in psychological violence perpetration after 3 months</li> </ul>
Rizzo et al., 2018	Date SMART (Skills to Manage Aggression in Relationships for Teens)	<ol> <li>Prevent sexual risk behaviour, cyberviolence, and offline violence in the dating relationships of adolescent girls who have previously experienced this type of violence</li> <li>Act to prevent perpetration and victimization</li> </ol>	<ul> <li>Group intervention</li> <li>Program activities:</li> <li>Six 2-hour group sessions</li> <li>One booster session 6 weeks after the end of the program</li> </ul>	<ul> <li>Country: United States</li> <li>Sample: 109 adolescent girls aged 14 to 18 (who have experienced dating violence)</li> <li>Measurement periods: 4 (pre- test, 3 months after, 6 months after, and 9 months after the program)</li> <li>Comparison group: 1 (similar program to Date SMART but without skill building)</li> </ul>	<ul> <li>No effect on youth cyber dating violence:</li> <li>↓ in sexual violence (experienced or perpetrated)</li> <li>9 months after the intervention</li> </ul>

## Table 1Overview summary of the selected programs and studies (cont'd)

Authors	Program evaluated	General program objectives	Program structure	Study characteristics	Results
Ortega- Baron et al., 2021	Safety.net	<ol> <li>Prevent online relationship risks (cyberbullying, sexting, online grooming, cyber dating violence)</li> <li>Prevent risks related to dysfunctional internet use (problematic internet use, online gambling disorder, video game addiction, smartphone addiction)</li> <li>Act to prevent victimization</li> </ol>	<ul> <li>School-based prevention program</li> <li>Program activities:</li> <li>Sixteen 1-hour sessions divided into 4 modules (individual modules for each specific objective)</li> <li>Each session is divided into 4 sections (presentation of information, individual or group activity, recommendations, and group reflection).</li> </ul>	<ul> <li>Country: Spain</li> <li>Sample: 165 students (aged 11 to 14)</li> <li>Measurement periods: 2 (pre-test and post-test)</li> <li>Control group: 1</li> </ul>	<ul> <li>No effect on youth cyber dating violence victimization:</li> <li>No significant decrease in the experienced cyberviolence by the youth in either group</li> </ul>
Carrascosa et al., 2019	<b>DARSI</b> (Developing Healthy and Egalitarian Adolescent Relationships)	<ol> <li>Prevent offline and online violence among youth (aged 12 to 17) in their peer relationships and dating relationships</li> <li>Act to prevent perpetration</li> </ol>	<ul> <li>School-based prevention program</li> <li>Program activities:</li> <li>Twelve 1-hour sessions</li> <li>Types of activities: role- playing, writing activities, case studies, and guided discussions</li> <li>Materials: audiovisual materials, songs, drawings, and stories about adolescents</li> </ul>	<ul> <li>Country: Spain</li> <li>Sample: 191 students (aged 12 to 17)</li> <li>Measurement periods: 2 (pre-test and post-test)</li> <li>Control groups: 2</li> </ul>	<ul> <li>Only impacts on risk factors associated with youth cyber dating violence:</li> <li>I in aggressive behaviours perpetrated against peers (cyberviolence, direct and indirect violence)</li> <li>I in sexist attitudes and beliefs in myths about romantic love</li> </ul>

## Table 1Overview summary of the selected programs and studies (cont'd)

Authors	Program evaluated	General program objectives	Program structure	Study characteristics	Results
Sánchez- Jiménez et al., 2018	Dat-e Adolescence	<ol> <li>Prevent offline and online youth cyber dating violence (youth aged 11 to 19)</li> <li>Act to prevent perpetration and victimization</li> </ol>	program	<ul> <li>Country: Spain</li> <li>Sample: 1,764 students (aged 11 to 19)</li> <li>Measurement periods: 2 (pre-test and post-test)</li> <li>Control group: 1</li> </ul>	<ul> <li>Only impacts on risk factors associated with youth cyber dating violence:</li> <li>↓ in acceptance of beliefs in myths about romantic love</li> <li>↑ in self-esteem and emotional regulation skills, including anger management</li> </ul>
Muñoz- Fernández et al., 2019				<ul> <li>Country: Spain</li> <li>Sample: 1,423 students (aged 11 to 19)</li> <li>Measurement periods: 3 (pre-test, post-test, and 6 months after the program)</li> <li>Control group: 1</li> </ul>	<ul> <li>No effect on youth cyber dating violence:</li> <li>I in serious physical violence experienced and perpetrated in dating relationships</li> <li>I in sexual violence experienced and perpetrated in dating relationships</li> <li>I in bullying experienced in dating relationships</li> </ul>

## 4.1 **Program objectives**

#### 4.1.1 General objectives

No program has the sole objective of preventing youth cyber dating violence. Three programs (Dat-e Adolescence, Brief ITP, Real Talk) are designed to prevent offline and online violence perpetration and victimization in youth dating relationships. The objective of one program (Safety.net) is to prevent victimization associated with the multiple risks that young people are exposed to online, including cyber dating violence as well as, for example, smartphone addiction and cyberbullying. Another program (DARSI) is designed to prevent the perpetration of offline and online violence in youth relationships, including dating relationships. The last program (Date SMART) aims to prevent sexual risk behaviours, offline violence, and cyberviolence perpetration and victimization in the dating relationships of adolescent girls who have previously experienced dating violence.

#### 4.1.2 Specific objectives

While their main objectives vary, the evaluated programs generally aim to promote skills and strategies for emotional regulation, conflict resolution, reducing negative feelings, and improving self-esteem, as well as healthy, empathetic, prosocial, and unaggressive behaviours. Some programs, depending on their approach or target population, include additional components in their interventions.

The DARSI program, which exclusively targets the perpetration of violence, includes a component intended to educate youth about the consequences of violence (e.g., depression, low self-esteem, loneliness, suicidal ideation) and to develop their critical thinking skills about sexist attitudes and myths about romantic love. The Safety.net program, which focuses more specifically on the risks that young people may face on the internet, makes participants more aware of the consequences of misuse of information and communication technology (ICT) and the risks it can cause, including exposure to cyber dating violence, sexting, smartphone addiction, and cyberbullying. The Real Talk program works with a population who has previously committed acts of violence in dating relationships, adjusting the intervention's objectives to the characteristics of each participant's life course. In addition to its objective of preventing dating violence, the Date SMART program also aims to prevent risky sexual behaviours by acting on factors related to the two issues, such as depressive symptoms and difficulties with behavioural and emotional self-regulation.

## 4.2 Program activities and intervention methods

The activities of the evaluated programs vary in form, ranging from a single session to 16 sessions. The length of a session ranges from 30 minutes to two hours. The programs combine different intervention methods that can be summarized by two non-mutually exclusive strategies: knowledge acquisition and skill building.

The activities dedicated to knowledge acquisition aim to educate youth on the consequences of violence, the risks of information and communication technologies, healthy behaviours to adopt in dating relationships, peer pressure, and the personal and social resources available to them. They also aim to improve recognition of a range of emotions and critical thinking about sexist attitudes and myths about romantic love (e.g., that jealousy is a sign of love, that someone is meant for you, that love conquers all, that the early passion in a relationship should last forever). The ways knowledge acquisition activities are deployed vary by program. These activities can include group information sessions (Safety.net, Date SMART), one-on-one information sessions (Real Talk), educational videos (DARSI, Dat-e Adolescence), or the reading of scientific studies (Brief ITP).

The skill building activities aim to improve skills in communication, problem-solving, emotion management, and risky situation management; to develop conflict resolution skills in violent situations; and to encourage young people to examine and use strategies to reduce their aggression and demonstrate healthy behaviours toward their partner. Done individually or in groups, these activities include role-playing with specific scenarios, writing activities, group discussions and exercises on prosocial behaviours, and examining strategies for behaving less aggressively.

## 4.3 Facilitators and training

The activities of three of the six programs were deployed by the same research staff (research assistants, researchers) who evaluated them (DARSI, Dat-e Adolescence, Brief ITP). Of these three programs, Dat-e Adolescence is unique in that the two last sessions were led by student volunteers, with the research staff being responsible for the first five. Following four hours of training, these students, with the support of the research staff, led their peers in two sessions aiming to promote coping and conflict resolution strategies in violent situations and to raise their awareness of peer pressure and bystander influence in dating violence.

The activities of the three other programs (Safety.net, Real Talk, Date SMART) were deployed by facilitators specifically trained for the program in question. For Safety.net, the program was led by teachers at the schools where it was implemented for evaluation. The selected teaching staff received 30 hours of online training containing written material, documentation, activities, and videos. The Real Talk program was led by individuals from the local community with experience in youth dating violence prevention or master's students in public health. These facilitators all

received a standardized 20 hours of training given by the head researcher to familiarize them with the methods for motivational-style interviews and brief interventions through readings, videos, and role-playing. The Date SMART program was led by either predoctoral and postdoctoral psychology trainees or mental health social workers who had experience working with youth. These facilitators received eight hours of training, including practice through role-playing and discussions on group management strategies, as well as a review of best practices for recognizing and managing dating violence in dating relationships and the consequences of violent trauma, since the population targeted by this program consisted of adolescent girls who had previously experienced dating violence.

### 4.4 Results of the program evaluations

The selected studies evaluated the impacts of the youth cyber dating violence prevention programs through different indicators. While this knowledge synthesis mainly focuses on the programs' impacts on youth cyber dating violence, the results of the identified studies also documented the interventions' effects on other aspects—some related to youth cyber dating violence and some not—such as other forms of experienced or perpetrated violence in a dating context or between peers, as well as a number of factors associated with violence or youth cyber dating violence (see appendix 4).

The studies all had at least one control or comparison group. They also presented a widely varying number of results regarding the programs' impacts on victimization and perpetration of youth cyber dating violence. These results were obtained by measuring various behaviours associated with cyberviolence as self-reported by the participating youth—using different Likert scales<sup>6</sup>— before their participation in the program and one or more times again after the program's completion, depending on the study. More specifically, youth cyber dating violence victimization was generally measured according to the frequency at which the participants stated that they had been victim of such online acts as controlling behaviours, insults, direct and indirect aggression, monitoring, cyberbullying, or humiliation by a partner over the preceding weeks or months. Youth cyber dating violence perpetration was also measured according to the frequency participants reported having committed such acts online over the course of the preceding weeks or months. Some studies included around a dozen guestions designed to measure youth cyber dating violence victimization and/or perpetration (Fernandez-Gonzalez et al., 2020; Ortega-Barón et al., 2021; Sánchez-Jiménez et al., 2018), while others, like Rothman and colleagues' study, used only one question to evaluate the program's effects on youth cyber dating violence perpetration. It should be noted that two studies did not directly measure the programs' impact on youth cyber dating violence, even though preventing this type of violence was among their objectives (Carrascosa et al., 2019; Muñoz-Fernández et al., 2019).

<sup>&</sup>lt;sup>6</sup> A Likert scale comprises one or more items or statements with which the respondent indicates their level of agreement or disagreement.

### 4.4.1 Programs with a measured impact on cyberviolence perpetration

The results of the identified studies show that only two of the six programs had an effect on the perpetration of youth cyber dating violence: Brief ITP and Real Talk. Fernàndez-Gonzàlez and colleagues evaluated the effects of the Brief ITP program, which is designed to prevent the victimization and perpetration of youth cyber dating violence, both offline and online. The authors of the study, who also designed the program, measured offline and online violence perpetration and victimization by the respondents in the six preceding months at four different time points: before the program's implementation, immediately following the program, six months after the program, and one year after the program. The authors concluded that the program helped reduce the frequency of offline and online violence committed by the participating youth against their partner or ex-partner. This decrease was even more significant one year after the program, compared to the measurements taken after six months. No effect was shown, however, on the frequency of cyber-aggression victimization following participation in the program.

Rothman and colleagues evaluated the effects of the Real Talk program, designed to prevent the perpetration of youth cyber dating violence, both offline and online, by individuals who have previously committed a violent act toward a partner. The authors, who had also designed the program, measured a decrease in the frequency of cyber-aggressions perpetrated by the young people three months after their participation in the program, with the effect no longer occurring six months after the program. However, only one question was used to measure acts of cyberviolence: checking a partner's emails or smartphone without their consent.

#### 4.4.2 Programs with no measured effect on cyberviolence

Carrascosa and colleagues evaluated the effects of the DARSI program (Developing Healthy and Egalitarian Adolescent Relationships), designed to prevent offline and online violence among young people in their peer and dating relationships. After running the program, the authors measured cyberviolence between peers (aggressive behaviours, bullying, insults, threats, etc.), sexist attitudes, beliefs in myths about romantic love, and aggressive acts between peers at school. The authors did not directly measure cyberviolence committed in a dating context. The authors' evaluation of the program found a lower frequency of violent acts committed online and offline between peers and reduced adherence to sexist attitudes and beliefs about romantic love among the participants. The authors then suggest, based on the literature, that the program's activities that led to such changes in attitudes, beliefs, and aggressive behaviours between peers may simultaneously contribute to preventing offline and online violence in dating contexts more specifically, as they share well-documented risk factors. From this perspective, they regard the DARSI program as capable of reducing the perpetration of youth cyber dating violence.

Ortega-Barón and colleagues evaluated the effects of the Safety.net program, designed to prevent victimization resulting from numerous issues related to internet use, including youth cyber dating violence. While the authors measured a reduction in the natural increase of victimization by cyberbullying, online grooming<sup>7</sup>, problematic internet use, and video game and smartphone addiction, they did not identify any decrease in the frequency of victimization associated with youth cyber dating violence.

The Dat-e Adolescence program was evaluated by two studies (Muñoz-Fernández et al., 2019; Sánchez-Jiménez et al., 2018). The results show that the program did not reduce youth cyber dating violence perpetration and victimization. Sánchez-Jiménez and colleagues nonetheless suggest that the program has an effect on different factors directly related to offline and online violence in youth cyber dating violence. Like the DARSI program evaluated by Carrascosa and colleagues, Dat-e Adolescence reduces adherence to beliefs in myths about romantic love, for example, and improves self-esteem and emotional regulation skills among the youth participants. Without measuring cyberviolence directly, Muñoz-Fernández and colleagues showed that the Dat-e Adolescence program reduces serious physical violence perpetration and victimization, sexual violence perpetration and victimization, and bullying victimization, all in dating contexts.

Rizzo and colleagues examined the Date SMART program, which is designed to prevent sexual risk behaviours and offline and online violence in the dating relationships of adolescent girls who have previously experienced dating violence. The results revealed a decrease only in sexual violence perpetration and victimization.

<sup>&</sup>lt;sup>7</sup> "Online grooming" refers to an adult communicating with a child online with the intent to solicit the child for sexual purposes.

## 5 DISCUSSION

## 5.1 Main findings and courses of action

Based on studies designed to evaluate the effectiveness of programs whose aims include preventing youth cyber dating violence, this synthesis documented six programs and described their general and specific objectives, activities, intervention methods, facilitators tasked with deploying them and facilitator training, and their impacts on the prevention of youth cyber dating violence. The results of the selected studies show that only two of the six programs, Brief ITP and Real Talk, reduce cyberviolence perpetrated by youth following the program, while none has an effect on cyberviolence victimization. The studies nonetheless highlight the programs' effects on other aspects associated with youth cyber dating violence, such as certain risk and protective factors (e.g., adherence to sexist attitudes and beliefs in myths about romantic love, self-esteem, emotional regulation) and on a variety of offline violent behaviours, both perpetrated and experienced (sexual, physical, and psychological; between intimate partners or between peers).

The main findings of this knowledge synthesis are presented and discussed in this section. Based on these findings and the youth dating violence prevention literature, courses of action from a public health perspective are proposed. These courses of action aim to improve practices to prevent youth cyber dating violence and to improve violence prevention programs that include a component on youth cyber dating violence specifically, and in doing so, take proactive action against it. Finally, the strengths and limitations of this synthesis are discussed.

## 5.1.1 Finding No. 1: Youth cyber dating violence prevention is generally integrated in youth dating violence prevention programs

The programs evaluated by the studies selected for this synthesis do not specifically target cyberviolence or include activities focused exclusively on this issue, except for the Safety.net program, which includes one session and one activity on youth cyber dating violence. In other words, the majority of the evaluated programs cover the prevention of youth dating violence broadly and do not include components on specific characteristics associated with the prevention of youth cyber dating violence, such as teaching about the forms of cyberviolence or developing skills for healthy and safe technology use in dating relationships. Their objectives are generally to prevent all forms of violence in youth dating relationships—and in the case of the DARSI program, in peer relationships—including cyberviolence. As per their prevention strategies, the programs' content generally targets the forms of violence and the risk and protective factors associated with both online and offline violence in youth dating contexts.

As shown in the scientific literature on violence prevention, there is a high degree of cooccurrence between online violence and offline violence (physical, psychological, and sexual) (Peterson and Densley, 2017), as well as between perpetrating and experiencing these forms of violence (Temple et al., 2016; Zweig et al., 2013). A number of authors who have examined the risk factors associated with offline and online violence, in dating and non-dating contexts, demonstrate that young people who have perpetrated or experienced a form of offline violence are more likely to perpetrate or experience a form of cyberviolence, and vice versa (Temple et al., 2016; Yahner et al., 2015; Zapor et al., 2017, Zweig et al., 2013). The reciprocity between online and offline violence and between perpetration and victimization thus supports the relevance of integrating components that are designed to act on the risk and protective factors associated with both online and offline violence in youth dating relationships into programs aiming to prevent youth dating violence. Some of the programs evaluated by the studies identified in this synthesis appear to have taken this into account.

In concrete terms, the common factors between online and offline violence addressed in these programs are self-esteem, empathy, encouraging prosocial behaviour (e.g., respect and friendliness toward others), emotional regulation, conflict management, aggression toward peers, sexual risk behaviours, and adherence to sexist attitudes and myths about romantic love. Sexist attitudes in adolescents are associated with the perpetration of offline violence (Pazos et al., 2014) and cyberviolence in dating contexts (Martínez-Pecino and Durán, 2019). These attitudes are also associated with beliefs in myths about romantic love (e.g., that jealousy is a sign of love, that the early passion in a relationship should last forever, that someone is meant for you), which can lead adolescents to justify or normalize violent or controlling behaviours toward a partner, perceive controlling or dependent behaviours as proof of love, or forgive their partner for acts committed (Hartwell et al., 2015; Rodríguez-Castro et al., 2013; Sánchez-Jiménez et al., 2018). Specifically targeting sexist attitudes and myths about romantic love is therefore a way to encourage young people to develop more positive relationships with their peers and dating partners, in both in-person and online interactions, and to change their behaviours to the extent that such violent behaviours would no longer be justified by beliefs that help normalize violence (Carrascosa et al., 2019; Sánchez-Jiménez et al., 2018). The evaluations of the DARSI and Dat-e Adolescence programs measured a decrease in the acceptance of beliefs in myths about romantic love and in adherence to sexist attitudes and suggest that these changes may contribute to the prevention of youth dating violence, no matter the form. While the authors who evaluated the Dat-e Adolescence program (Sánchez-Jiménez et al., 2018) did not measure any decrease in the perpetration of youth cyber dating violence, they nonetheless measured an improvement in self-esteem and emotional regulation (e.g., anger regulation) in the young people participating in the program, which are both protective factors associated with dating violence (Foshee et al., 2004; Foshee et al., 2015; Van Ouystel et al., 2017; Zweig et al., 2014).

Addressing risk and protective factors common to various forms of violence seems a promising avenue for preventing youth cyber dating violence, as demonstrated by the Brief ITP and Real Talk programs for preventing the perpetration of youth cyber dating violence, and the DARSI program for the perpetration of cyberviolence between peers. However, considering that cyberviolence has its own unique characteristics that differentiate it from offline violence on a number of points, it is essential for future research to focus on factors specifically associated with cyberviolence (Caridade and Braga, 2020; Caridade et al., 2019; Peskin et al., 2017). At this time, the few studies that address factors associated with youth cyber dating violence generally have inconclusive or divergent results (Caridade and Braga, 2020). Among the most agreed-upon factors are adverse childhood experiences (e.g., witnessing domestic violence, experiencing neglect), bullying victimization, alcohol and drug consumption, delinquency, physical health problems, depression, anxiety, symptoms of post-traumatic stress, and perceived low social support (Caridade and Braga, 2020; Lachapelle et al., 2021). These factors are, however, similar to the factors associated with offline violence (Peskin et al., 2017). As offline and online violence tend to share common risk factors, their prevention should be addressed concurrently.

#### **Course of action No. 1:**

## Consider the continuum between offline violence and cyber dating violence by acting on the risk and protective factors common to both.

Initiatives to prevent youth cyber dating violence must consider the continuum between offline violence—between peers or dating partners—and cyber dating violence, as they share a high degree of co-occurrence and a number of common risk and protective factors on which action can be taken. For example, by acting on the attitudes that normalize violence (e.g., sexist attitudes and myths about romantic love) and on emotional regulation skills, it may be possible to reduce the risks of perpetrating or experiencing both offline violence and cyber dating violence. However, while much of the scientific literature has documented specific aspects of cyberviolence, no interventions uniquely targeting these issues were documented in the selected studies. It will therefore be necessary in the future to conduct research on the risk and protective factors associated with cyber dating violence specifically. This research will help better define the interventions to develop to prevent youth cyber dating violence.

## 5.1.2 Finding No. 2: The evaluated programs only target youth on an individual basis

Whether the effects were measured or not, the programs evaluated in the studies examined in this synthesis all address risk and protective factors at the individual level of the ecological model. Their activities addressed only the individual and relationship skills of young people. None of the evaluated programs developed activities intended to be rolled out in environments frequented by young people, such as at home, at school, or in the community, or to be deployed for other people in these environments (e.g., parents, school staff, neighbours). Yet, all these environments, their characteristics, and the people in them have the potential to influence young people's attitudes and behaviours, as well as their risk of committing or experiencing cyber dating violence.

The violence prevention literature stresses the importance of deploying programs that act on all levels of the ecological model, for example, in various environments that can have an effect on problematic behaviours (Nation et al., 2003). Violence prevention programs that, in addition to targeting individual factors (e.g., knowledge, skills), include components intended to change the community environment or to prevent violence in a given population on the whole have been deemed promising (Hébert et al., 2018). For example, it has been shown that primary prevention interventions intended to prevent or reduce youth dating violence can be effective in reducing the youth dating violence committed among young people aged 12 to 24, particularly by creating protective environments (e.g., improving educational environments by identifying risky situations and strengthening staff presence) (Finnie et al., 2022).

To date, the scientific literature has only paid limited attention to risk and protective factors associated with youth cyber dating violence perpetration and victimization on the living environment scale, such as in community environments (Caridade and Braga, 2020; Caridade et al., 2019, 2020). While more research is needed, studies have highlighted that some factors associated with family environments have a protective effect against the perpetration of youth cyber dating violence, such as parental involvement, parental supervision, and family cohesiveness (Peskin et al., 2017; Rivas and Gimeno, 2017; Smith-Darden et al., 2017). In terms of educational environments, a sense of belonging in school, involvement in one's school, and a positive perception of teacher support are considered to be other factors that decrease the risk of being involved in youth cyber dating violence (Rivas and Gimeno, 2017). According to Smith-Darden and colleagues, feeling safe in one's community also seems to have a protective effect against the perpetration of cyberviolence involving monitoring behaviours (Smith-Darden et al., 2017). Protective factors, while less studied than risk factors, are a promising target for prevention (Hébert et al., 2017).

In Québec, the Empreinte – Agir ensemble contre les agressions à caractère sexuel<sup>8</sup> program for high school students focuses on reducing social tolerance of sexual violence, including sexual cyberbullying. In addition to workshops for young people, the program includes activities that target youth environments, offering school staff training and short educational videos for parents (Bergeron et al., 2017). The results of the evaluations of these two components showed that the Empreinte program enabled participating staff and parents to improve their knowledge and strengthen unbiased attitudes and feelings of self-efficacy in dealing with sexual violence and enabled two-thirds of parents to initiate a discussion about sexual violence with a young person in their circle within one month of viewing the videos (Jodoin et al., 2021; Julien et al., 2020).

While they have not yet been evaluated and are therefore not included in our review, other Québec youth violence prevention initiatives, for both online and offline violence, in a dating context or not, have been deployed to take action on young people's important life environments. For example, the Marie-Vincent Foundation has developed educational videos intended to prevent cyber sexual violence among young people. The videos are intended for young people to view as part of school prevention programs and for their parents, who can access them on the Foundation's website. In addition, the videos are accompanied by tools specifically for parents to support their discussions with their teenager about the issues addressed in the videos. The <u>Sparx</u><sup>9</sup> project is another program that acts on several environments and aims to prevent youth dating violence. To have an impact in various environments, the program involves activities for students in the third and fourth years of secondary school, training and educational tools for school staff, and educational videos for parents and adults in young people's lives. Actively involving parents in youth dating violence prevention programs has been evaluated by several studies, which have recorded a decrease in physical and sexual violence perpetrated in a romantic context by, for example, encouraging parents to discuss this kind of violence with their teenager (Piolanti and Foran, 2022).

By acting in both family and school environments, the scope of these Québec initiatives has the potential to influence not just young people directly, but also the environments they frequent. With the exception of the Empreintes program, which has been evaluated, it is not possible to draw any conclusions at present about their effects of preventing online and offline sexual violence in youth dating relationships.

<sup>&</sup>lt;sup>8</sup> The Empreinte – Agir ensemble contre les aggressions à caractère sexuelle program was developed in 2017 by two researchers from the Université du Québec à Montréal (UQÀM), the 26 members of the Regroupement québécois des Centres d'aide et de lutte contre les aggressions à caractère sexuelle (RQCALACS), and UQAM Community Services.

<sup>&</sup>lt;sup>9</sup> The Sparx project was developed in 2019 by Martine Hébert's research laboratory in UQÀM's sexology department, in collaboration with the Direction régionale de santé publique de Montréal and Tel-Jeunes.

#### **Course of action No. 2:**

## Develop initiatives that include components aimed at reaching out to various environments frequented by young people.

While the prevention programs with demonstrated effects included in this synthesis target individual factors only, the violence prevention literature underscores the importance of taking action in everyday environments—at home, at school, and in the community—to proactively prevent problematic behaviour. Interventions that target everyday environments more broadly should therefore be developed and integrated into existing youth cyber dating violence prevention programs—or at least be considered when developing new programs and interventions. This could be a way to consider the protective factors documented in the literature—including parental involvement and supervision, family cohesiveness, a sense of belonging in school, involvement in one's school, teacher support, and a feeling of safety in one's community—when developing interventions for these environments. In addition, new studies on social and environmental factors associated with cyberviolence, and not just individual factors, should be conducted to improve our knowledge on the subject.

## 5.1.3 Finding No. 3: The intervention facilitators have a range of professional backgrounds and receive varied training

In the studies selected for this synthesis, the people responsible for rolling out the evaluated programs and leading the activities have a range of professional backgrounds. They may be researchers themselves (i.e., the authors of the studies), their assistants, predoctoral or postdoctoral trainees in psychology, teachers, social workers, mental health counsellors, community workers, or, in the case of the Dat-e Adolescence program, student volunteers. The training provided to prepare these facilitators to deploy the program—with the exception of the researchers—is also varied. The training may be provided online or in person, run from eight to 30 hours, and include different materials such as online videos, training guides, scenarios, readings, role-playing exercises, or group discussions with other trainees. While it is difficult to concretely measure the specific impact of these facilitators and their training on program effectiveness, a reduction in the risk factors associated with both offline and online violence in dating relationships was nonetheless shown for all these programs with the exception of the DARSI program.

Beyond the facilitators' training, which was neither described in detail nor evaluated in the selected studies, it is important to recruit people who are sensitive to the specific issues of the prevention program and who have some expertise with the target population (Carmody, 2014). For example, the Date SMART program is delivered by facilitators chosen for their experience in helping youth: predoctoral and postdoctoral trainees in psychology, social workers, and mental health counsellors. Regardless of their assigned activities, whether to facilitate Date SMART activities or the activities of the comparison intervention, all received trauma-informed training

and participated in weekly supervisory meetings to discuss group management problems encountered (Rizzo et al., 2018). Given the training received by all facilitators and the similarity of the subjects addressed in both groups, Rizzo and colleagues note that one limitation of their study is that the comparison group became a therapy group, unintentionally offering therapeutic support and a source of social support that had an effect on participants. Thus, employing a variety of facilitators in deploying such a program, providing them with intervention-specific training, and ensuring they have access to ongoing support and supervision are important practices to ensure violence prevention program effectiveness (Carmody, 2014; Ellis, 2008; Nation et al., 2003).

In addition, though this component has been little studied, the active involvement of young people in developing, rolling out, and facilitating these programs has been deemed a promising practice for interventions intended to prevent youth dating violence, considering its effectiveness in changing young people's knowledge, attitudes, and emotional well-adjustment (Connolly et al., 2015; McLeod et al., 2015). In this sense, having students participate in teaching their peers in the last sessions of the Dat-e Adolescence program is a promising intervention practice, as it involves a person who is not an authority figure (e.g., teacher) in facilitation. In so doing, prevention messages have the potential to be better accepted and internalized by young people, as they are coming from people they can identify with (DiClemente, 1993; Menesi et al., 2012; Wissink, 2004). For example, the Teach One Reach One program, which is based in the United States and aims to reduce the risks associated with youth dating violence, arranges for young people to be involved as peer helpers. An evaluation of this specific program component on the attitudes of youth participants showed a reduction in their acceptance of dating violence (Ritchwood et al., 2015). Furthermore, the Italy-based NoTrap! program aims to encourage peer support and assistance to prevent bullying and cyberbullying at school, thereby reducing victimization. Evaluation results showed that the program significantly contributed to reducing bullying and cyberbullying victimization and perpetration among the 14- and 15-year-olds who participated in the program, even six months after the program (Palladino et al., 2016).

Many Québec and Canadian violence prevention programs incorporate this approach. For example, as mentioned in our second finding, the <u>Sparx</u> project, which aims to prevent youth dating violence, and the Marie-Vincent Foundation's <u>Preventing Online Sexual Violence among</u> <u>Youth with a Peer-Based Prevention Approach</u>, both include a component that involves young people as prevention actors. A survey developed and distributed by the Foundation to young people in a pre-project phase found that they respond positively to a peer-based prevention approach, and that they emphasize their preference for peer-based prevention. Québec's <u>École en santé</u> approach, implemented in the province's educational institutions, aims to involve young people in prevention and promotion activities by preparing them to facilitate activities, for example, thereby fostering their responsibility, leadership, and collaboration on some

aspects of these activities. The Canadian Imprint Project<sup>10</sup> involves students throughout the process by tasking them with identifying a problem in their school, developing an action plan, and then applying it in their school environment throughout the year. This is another example of an initiative that fosters student engagement and leadership, increasing their ability to act in their community. Still lacking evaluation, these programs that actively involve young people are nonetheless adopting a promising approach, according to a number of researchers, to address topics that directly concern youth (Fernet et al., 2022).

#### **Course of action No. 3:**

# Provide facilitators with adequate training that targets issues related to youth cyber dating violence and actively involve young people in the implementation of interventions.

Given the diversity of training and skills of the facilitators carrying out violence prevention programs, it is important to provide them with training that includes a specific component on youth cyber dating violence issues, whether or not the program targets only this type of violence. It would also be relevant to give facilitators access to support and supervision both during their training and while carrying out the program. Practicing program implementation (e.g., role-playing activities) would be another promising avenue to consider when training program facilitators. Having students participate as facilitators (or peer educators) could also help the program be positively received and its messages be better internalized by students participating in the program, as preventative messages would be coming from peers with whom the students can better identify.

## 5.1.4 Finding #4: The programs' activities combine two main intervention methods: knowledge acquisition and skill building

The two programs (Brief ITP and Real Talk) that show an effect on the perpetration of youth cyber dating violence in this synthesis include activities that combine knowledge acquisition and skill building, though with a greater emphasis placed on the latter. For example, in the Brief ITP program, participants are asked to read neurological and behavioural studies that show that individuals have the potential to change, then to describe a situation in which they felt withdrawn, rejected, or disappointed by a peer. They then had to explain in a few paragraphs what they would say to another person in the same situation to help them understand that people and some situations can change. The goal of this program's activities was ultimately to reduce aggressive attitudes and behaviours toward other students, to promote prosocial behaviour toward other students, and to encourage empathy, self-esteem, and self-confidence in stressful situations, all the while reducing the negative emotions associated with these situations.

<sup>&</sup>lt;sup>10</sup> The Imprint Project is a program to support high school student committees in the aim to promote respect for diversity and to combat intolerance in all its forms (e.g., bullying, discrimination). It was developed by the ENSEMBLE for the respect of diversity foundation.

Thus, after beginning with knowledge acquisition (i.e., reading studies intended to alter attitudes toward change), this program mainly focuses on skill building—explaining how change is possible—intended to foster the adoption of healthy, prosocial, non-aggressive behaviours. The same is true for the Real Talk program, which consists of a personalized intervention for developing strategies, with the help of the young person, intended to reduce violent behaviours, following an interview with a facilitator specialized in youth dating violence prevention.

Knowledge acquisition nevertheless remains an important objective to include in activities planned in such programs. In general, raising young people's awareness of the consequences of dating violence, helping them recognize the possible offline and online forms of violence in a relationship, and helping them detect sexist attitudes and myths about romantic love are essential knowledge to communicate for adolescents to develop and maintain healthy intimate relationships (De La Rue et al., 2017; Fernet et al., 2019; Sánchez-Jiménez et al., 2018). Considering that adherence to sexist attitudes and beliefs in myths about romantic love can lead young people to normalize, accept, and even justify abusive and controlling behaviour in intimate relationships, implementing activities that aim specifically to reduce adherence to these attitudes and demystify these beliefs through prevention programs, such as DARSI and Dat-e Adolescence, can contribute to preventing youth dating violence (Carrascosa et al., 2019; Sánchez-Jiménez et al., 2018). The results of the study that evaluated the DARSI program, whose activities were mainly based on knowledge acquisition, showed a decrease in adherence to sexist attitudes and beliefs in youth participants<sup>11</sup>.

In terms of preventing cyberviolence more specifically, acquiring knowledge about information and communication technologies, their risks, and associated consequences is an important element to consider and include, as in the Safety.net program, which aims to raise young people's awareness of technology characteristics that can involve risks. According to the evaluation study, this program reduces victimization linked to several technology-specific issues, including problematic internet use, cyberbullying, online grooming, and video game and smartphone addiction (Ortega-Barón et al., 2021).

Nevertheless, although attitude-changing knowledge acquisition is an important prerequisite to combat youth dating violence, it is, according to the WHO, unlikely to be sufficient to lead to lasting behavioural change (OMS, 2012). De La Rue and colleagues' meta-analysis, which examined 23 studies that evaluated the effects of youth dating violence prevention programs, confirms the need to place greater emphasis on intervention methods targeting skill building. Their findings showed that the programs evaluated—the majority of which focused on

<sup>&</sup>lt;sup>11</sup> In addition, this program also had a measured effect of decreasing the frequency of students' aggressive behaviours—direct, indirect, and online—toward their peers (Carrascosa et al., 2019). The co-occurrence of peer violence and youth dating violence has been well documented in the literature (Cava et al., 2015; Cava et al., 2021; Debnam et al., 2014), leading Carrascosa and colleagues (2019) to call for including activities intended to prevent both peer violence and youth dating violence in the same program.

knowledge acquisition—are effective in raising young people's awareness of various forms of dating violence and changing attitudes that legitimize such violence. However, these programs do not reduce the frequency of dating violence perpetration, nor the experienced violence (De La Rue et al., 2017). In other words, prevention programs that focus mainly on knowledge acquisition and changing attitudes are unlikely to lead to behavioural changes (De La Rue et al., 2014; Fellmeth et al., 2013).

The scientific literature on violence prevention emphasizes the importance of using various activities and giving priority to intervention methods aimed at skill building, as this strategy proves to be essential for changing behaviour (Cornelius and Resseguie, 2007; De La Rue et al., 2017; Nation et al., 2003). For example, several authors consider social and emotional skill building in young people to be promising because it seems to enable students to better manage conflicts and their emotions, develop positive dating relationships, and know the steps to take to withdraw from a violent intimate relationship (Bellis et al., 2012; Couture et al., 2020; De La Rue et al., 2017; Noonan and Charles, 2009; OMS, 2012). It is important to practice these skills through role-playing activities, demonstrations, and hands-on exercises in interventions to bring about behavioural change in young people (Cornelius and Resseguie, 2007). The Dat-e Adolescence program, which improved young people's emotional regulation skills, and Date SMART, which focused on skill building in conflict management and sexual decision-making, both reduced various forms of youth dating violence, including physical and sexual violence (Sánchez-Jiménez et al., 2018; Muñoz-Fernández et al., 2019; Rizzo et al., 2018). The Date SMART program included discussions and activities in each session to practice the skills learned in the previous sessions and the current session. For example, the participants (all adolescent girls) could apply the skills they learned for managing emotions and thoughts in a previous session to situations where they were confronted with sensitive content to which they might react (Rizzo et al., 2018).

Specific to youth cyber dating violence, other skills aimed at improving the online social skills of young people and the healthy, responsible, and safe use of information and communication technologies should also be considered in the development of youth cyber dating violence prevention programs (Gámez-Guadix et al., 2018). For example, the ConRed prevention program, which aims to prevent cyberbullying and other online risks for youth, includes activities intended to improve the technology and communication skills of young people with digital devices in its curriculum (e.g., learning to control personal information on social media and to limit their internet use) to foster healthy and safe social media and internet use. The program's measured effect decreasing the prevalence of cyberbullying perpetration and victimization support the relevance of developing these skills, among other things, to prevent cyberviolence (Ortega-Ruiz et al., 2012). Other behaviours, such as sharing passwords with one's partner, could also be targeted by program activities, as such behaviours can lead to victimization in intimate relationships (Burke et al., 2011).
### **Course of action No. 4:**

# Integrate both knowledge acquisition and skill building activities into prevention programs.

While activities designed for knowledge acquisition are essential, the scientific literature on violence prevention highlights the importance of including activities for youth to develop and apply skills that will help them reduce violent behaviours in dating relationships. Acquiring knowledge on the forms and consequences of dating violence, sexist attitudes, beliefs in myths about romantic love, and the risks of communication technologies is useful for educating youth but insufficient to lead to lasting behavioural change. For this reason, to prevent youth dating violence both online and offline, it seems advisable to integrate intervention methods that aim to help young people develop and practice a number of skills. Improving their communication and problem-solving skills, developing healthy conflict resolution skills, and promoting the use of strategies to reduce their aggression and adopt healthy habits toward partners are all examples of skills to develop in young people in the interest of preventing violence. While protective skills specific to youth cyber dating violence are little documented in the scientific literature, young people's control of their personal information on social media and ability to limit their time online are promising avenues that are worth exploring to prevent youth cyber dating violence.

# 5.2 Strengths and limitations

According to the results of the literature review carried out for this project, this is the first knowledge synthesis, since the scientific article by Galende and colleagues (2020)<sup>12</sup>, to offer an analysis of evaluations of violence prevention programs that have a component designed to prevent youth cyber dating violence and to identify avenues for improving youth cyber dating violence prevention. A rigorous methodology, based on a systematic narrative review of the scientific literature, was used and includes research in numerous databases and from the grey literature. The articles' quality and scientific rigour was also assessed to ensure that only articles of high scientific quality were included in this review.

Despite the strengths of this study, a number of limitations merit mention. First, despite efforts to collect all scientific articles from the grey literature on the subject, it is possible that not all relevant documents were included in this synthesis. The inclusion criteria that studies be produced in member countries of the OECD and that they be written in French or English may have eliminated some from consideration. Next, three of the evaluated programs (Brief ITP, Real

<sup>&</sup>lt;sup>12</sup> The article by Galande and colleagues identified four of the seven articles selected in this work and had similar objectives to this project: reporting on the effectiveness of prevention programs including a component designed to prevent youth cyber dating violence (2020). However, their findings and courses of action for improving the prevention of youth cyber dating violence using best practices in youth dating violence prevention are less ambitious.

Talk, Date SMART) were developed and evaluated by the authors of the articles. Although this evaluation method generally affords a better understanding of the program and facilitates the evaluators' access to data, it is possible that it also created biases in the evaluation of the results, presenting them more favourably (International Centre for the Prevention of Crime [see Centre international pour la prévention de la criminalité in References], 2021). The study evaluating one of the programs (Real Talk) is also based solely on the results of a single question used to measure cyberviolence perpetration behaviours. This question asked about a specific online monitoring behaviour: checking a partner's emails or smartphone without their consent. Moreover, a gap was identified in the examined studies in the medium- and long-term measurement of effects attributed to the program. Three studies evaluated the results immediately after the young people's participation in the program. Consequently, it is not possible to document the program's long-term effects in youth and in turn conclude whether these effects are sustainable over time. The observed changes might vary over time. Another limitation is that the identified studies generally lack detail in their descriptions of the conditions surrounding the program's implementation in the field, its activities and content, the facilitators' impression of the training, and the participating students' impression of the program. Moreover, the results of the identified studies were based solely on self-reported victimization and perpetration of youth cyber dating violence, thus including biases (e.g., social desirability) in the conclusions on the prevention programs' effects. Other methods, like conducting semistructured interviews, may therefore supplement the quantitative measurements and provide a complementary evaluation on the impact of the programs. While the main objective of this synthesis was to report on the effectiveness of the programs based on the results measuring changes in youth cyber dating violence perpetration and victimization, it is important to consider all these elements when interpreting the results and proposed courses of action, as it is a matter of the conditions necessary for a successful prevention program.

# 6 CONCLUSION

Online communication has become an inevitable part of young people's relationships, including their dating relationships. Although youth cyber dating violence is relatively new, the infiltration of youth dating violence into online spaces has already been well documented. The same is true for its consequences, as victims of cyber dating violence are exposed to greater public humiliation, have more difficulty escaping violent behaviours, can feel more isolated, and may suffer from insecurity, in addition to the consequences of offline violence. Youth dating violence, whether offline or online, is therefore a public health issue of concern.

With this in mind, this knowledge synthesis aimed to describe the state of knowledge on youth cyber dating violence prevention and to guide the development and implementation of proactive preventative measures against this issue. To do so, an analysis was conducted on studies evaluating the effectiveness of youth cyber dating violence prevention programs and courses of action were proposed to improve youth cyber dating violence prevention based on the findings of the selected studies and best practices in the prevention of youth dating violence.

This synthesis of knowledge identified seven studies seeking to evaluate the effects of six intervention programs that include a component designed to prevent youth cyber dating violence. The analysis of the studies made it possible to document the programs' general and specific objectives, activities, intervention methods, facilitators tasked with deploying them and facilitator training, and effects on the prevention of youth cyber dating violence. None of the programs evaluated by the selected studies was specifically designed for youth cyber dating violence prevention. The results of the identified studies showed that only two of the six programs, Brief ITP and Real Talk, reduced cyberviolence perpetrated by youth following their participation in the program, while none had an effect on cyberviolence victimization.

Four main findings were drawn from this knowledge synthesis. Based on these findings and scientific literature on youth dating violence prevention, novel courses of action have been proposed to improve youth cyber dating violence prevention practices in general and prevention programs including a component designed to prevent youth cyber dating violence more specifically. The four proposed courses of action are the following: 1) consider the continuum between offline violence and cyber dating violence by acting on the risk and protective factors common to both, 2) develop initiatives that include components aimed at reaching out to various environments frequented by young people, 3) provide facilitators with adequate training that targets issues related to youth cyber dating violence and actively involve young people in the implementation of interventions, and 4) integrate both knowledge acquisition and skill building activities into prevention programs.

This review brought to light that the literature on youth cyber dating violence prevention, although little developed, does not appear to recommend developing a prevention program for this issue specifically. The literature instead suggests integrating interventions designed to prevent youth cyber dating violence into general youth dating violence prevention programs, as well as into sexuality education initiatives and initiatives to promote positive and egalitarian dating relationships. The novel courses of action proposed in this work will certainly contribute to developing promising prevention practices for youth cyber dating violence and improving related interventions. New studies will nonetheless be necessary to better assess the impacts of programs to prevent dating violence, including cyberviolence, and to better identify their consequences on victimization and violent behaviours, both offline and online.

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# APPENDIX 1 RESEARCH STRATEGY

### **Scientific literature**

### Medline

#### Searched 2021-07-29

#	Search	Results
1	(cyber* or digital or electronic or facebook or instagram or internet or online or "on-line" or "social media*" or technolog* or "text messag*" or "tik tok" or tweet* or twitter or virtual or whatsapp* or web or youtube).ti,ab,kf. or internet/ or cyberbullying/	1,292,693
2	(abus* or aggress* or bully* or harass* or intimidat* or stalk* or victimiz* or violence*).ti,kf. or "intimate partner violence"/ or cyberbullying/	133,769
3	(dating or flirt* or intimate or ((love or romantic) adj relationship*) or partner*).ti,kf. or "intimate partner violence"/	45,450
4	(teen* or youth* or adolescen* or juvenile* or youngster* or first-grader* or second-grader* or third-grader* or fourth-grader* or fifth-grader* or sixth-grader* or seventh-grader* or highschool* or college* or ((secondary or high*) adj2 (school* or education))).ti,kf,ab. or adolescent/	2,415,718
5	and/1-4	307
6	(cyber* or digital or electronic or facebook or instagram or internet or online or "on-line" or "social media*" or technolog* or "text messag*" or "tik tok" or tweet* or twitter or virtual or whatsapp* or web or youtube).ab.	1,157,581
7	(abus* or aggress* or bully* or harass* or intimidat* or stalk* or victimiz* or violence*).ab.	384,107
8	(dating or flirt* or intimate or ((love or romantic) adj relationship*) or partner*).ab.	200,005
9	6 adj8 7 adj8 8	169
10	9 and 4	112
11	5 or 10	328
12	11 and (english or french).lg.	324
13	limit 12 to yr=2011-2021	306

# PsycInfo

Searched 2021-07-29

#	Search	Results
1	(cyber* or digital or electronic or facebook or instagram or internet or online or "on-line" or "social media*" or technolog* or "text messag*" or "tik tok" or tweet* or twitter or virtual or whatsapp* or web or youtube).ti,ab,id. or internet/ or cyberbullying/	316,749
2	(abus* or aggress* or bully* or harass* or intimidat* or stalk* or victimiz* or violence*).ti,id. or "intimate partner violence"/ or cyberbullying/	173,445
3	(dating or flirt* or intimate or ((love or romantic) adj relationship*) or partner*).ti,id. or "intimate partner violence"/	45,969
4	(teen* or youth* or adolescen* or juvenile* or youngster* or first-grader* or second-grader* or third-grader* or fourth-grader* or fifth-grader* or sixth-grader* or seventh-grader* or highschool* or college* or ((secondary or high*) adj2 (school* or education))).ti,id,ab. or "early adolescence"/	672,782
5	and/1-4	304
6	(cyber* or digital or electronic or facebook or instagram or internet or online or "on-line" or "social media*" or technolog* or "text messag*" or "tik tok" or tweet* or twitter or virtual or whatsapp* or web or youtube).ab.	303,057
7	(abus* or aggress* or bully* or harass* or intimidat* or stalk* or victimiz* or violence*).ab.	274,454
8	(dating or flirt* or intimate or ((love or romantic) adj relationship*) or partner*).ab.	128,757
9	6 adj8 7 adj8 8	251
10	9 and 4	146
11	5 or 10	331
12	11 and (english or french).lg.	298
13	limit 12 to yr=2011-2021	272

# EBSCO databases: ERIC, Health Policy Reference Center, Political Science Complete, Public Affairs Index, Psychology & Behavioral Sciences Collection, SocINDEX

Searched 2021-07-29

#	Search	Results
1	TI (cyber* or digital or electronic or facebook or instagram or internet or online or "on-line" or "social media*" or technolog* or "text messag*" or "tik tok" or tweet* or twitter or virtual or whatsapp* or web or youtube) OR AB (cyber* or digital or electronic or facebook or instagram or internet or online or "on-line" or "social media*" or technolog* or "text messag*" or "tik tok" or tweet* or twitter or virtual or whatsapp* or web or youtube) OR KW (cyber* or digital or electronic or facebook or instagram or internet or online or "on- line" or "social media*" or tweet* or twitter or virtual or whatsapp* or web or youtube) OR internet or or social media*" or technolog* or "text messag*" or "tik tok" or tweet* or twitter or virtual or whatsapp* or web or youtube)	707,147
2	TI (abus* or aggress* or bully* or harass* or intimidat* or stalk* or victimiz* or violence*) OR KW (abus* or aggress* or bully* or harass* or intimidat* or stalk* or victimiz* or violence*)	187,981
3	Tl (dating or flirt* or intimate or ((love or romantic) adj relationship*) or partner*) OR KW (dating or flirt* or intimate or ((love or romantic) adj relationship*) or partner*)	56,748
4	TI (teen* or youth* or adolescen* or juvenile* or youngster* or first-grader* or second- grader* or third-grader* or fourth-grader* or fifth-grader* or sixth-grader* or seventh- grader* or highschool* or college* or ((secondary or high*) N1 (school* or education))) OR AB (teen* or youth* or adolescen* or juvenile* or youngster* or first-grader* or second- grader* or third-grader* or fourth-grader* or fifth-grader* or sixth-grader* or seventh- grader* or highschool* or college* or ((secondary or high*) N1 (school* or education))) OR KW (teen* or youth* or adolescen* or juvenile* or youngster* or first-grader* or second- grader* or third-grader* or fourth-grader* or juvenile* or youngster* or first-grader* or second- grader* or third-grader* or fourth-grader* or fifth-grader* or sixth-grader* or second- grader* or third-grader* or fourth-grader* or fifth-grader* or sixth-grader* or seventh- grader* or third-grader* or fourth-grader* or fifth-grader* or sixth-grader* or seventh- grader* or highschool* or college* or ((secondary or high*) N1 (school* or education)))	973,020
5	S1 AND S2 AND S3 AND S4	191
6	AB (cyber* or digital or electronic or facebook or instagram or internet or online or "on- line" or "social media*" or technolog* or "text messag*" or "tik tok" or tweet* or twitter or virtual or whatsapp* or web or youtube)	664,438
7	AB (abus* or aggress* or bully* or harass* or intimidat* or stalk* or victimiz* or violence*)	326,399
8	AB (dating or flirt* or intimate or ((love or romantic) adj relationship*) or partner*)	193,495
9	S6 N7 S7 N7 S8	172
10	S9 AND S4	99
11	S5 OR S10	220
12	S11 AND LA (english or french)	219
13	S12 AND (DT 2011-2021)	178: SocINDEX: 74 PBSC: 35 HPRC: 31 ERIC: 26 PAI: 11 PSC: 1

# **Grey literature**

For each research strategy, the 50 first references (or fewer, as available) were explored.

## Search engines

### Google

Searched 2021-10

#	Search
1	"cyber électronique "en ligne" AROUND(6)
	violence abus agression harcèlement intimidation victimisation" cyberviolence cyberinti
	midation cyberharcèlement fréquentations amoureux partenaires sexuelle " relations
	AROUND(2) intimes amoureuses adolescents jeunes (école secondaire
2	"cyber electronic online AROUND(6)
	violence abuse aggression harassment intimidation victimization bullying" cyberviolenc
	e cyberbullying cyberharassment dating intimate partner "love romantic AROUND(2)
	relationship" adolescent teenager teen youth young highschool college
3	"prévention cyber électronique "en ligne" AROUND(6)
	violence abus agression harcèlement intimidation victimisation" cyberviolence cyberinti
	midation cyberharcèlement fréquentations amoureux partenaires sexuelle " relations
	AROUND(2) intimes amoureuses adolescents jeunes école secondaire
4	"prevention cyber electronic online AROUND(6)
	violence abuse aggression harassment intimidation victimization bullying" cyberviolenc
	e cyberbullying cyberharassment dating intimate partner "love romantic AROUND(2)
	relationship" adolescent teenager teen youth young highschool college

### **OPHLA**

Searched 2021-10

#	Search
1	"cyber électronique "en ligne" AROUND(6)
	violence abus agression harcèlement intimidation victimisation" cyberviolence cyberinti
	midation cyberharcèlement fréquentations amoureux partenaires sexuelle " relations
	AROUND(2) intimes amoureuses "adolescents jeunes  " école secondaire "
2	"cyber electronic online AROUND(6)
	violence abuse aggression harassment intimidation victimization bullying" cyberviolence
	cyberbullying cyberharassment dating intimate partner "love romantic AROUND(2)
	relationship" adolescent/teenager/teen/youth/young/highschool/college

## **Grey literature databases**

### Santécom

Searched 2021-10

#	Search
1	su, wrdl: "violence dans les fréquentations" and (su, wrdl : adolescent or su, wrdl:
	adolescents or su, wrdl: "élèves du secondaires")

## **CUBIQ** catalogue

Searched 2021-10

#	Search
1	(cyberviolence OU cyberintimidation OU cyberharcèlement) ET (ado* OU jeune* OU "école secondaire")

### **Specific sources**

### **Centers for Disease Control and Prevention**

#### Searched 2021-10

#	Search
	site:cdc.gov "cyber electronic online AROUND(6)
1	violence abuse aggression harassment intimidation victimization bullying" cyberviolence
•	cyberbullying cyberharassment dating intimate partner "love romantic AROUND(2)
	relationship" adolescent teenager teen youth young highschool college

## World Health Organization

Searched 2021-10

#	Search
	site:who.int "cyber electronic online AROUND(6)
1	violence abuse aggression harassment intimidation victimization bullying" cyberviolence
I	cyberbullying cyberharassment dating intimate partner "love romantic AROUND(2)
	relationship" adolescent teenager teen youth young highschool college

# Centre de recherche interdisciplinaire sur les problèmes conjugaux et les agressions sexuelles

#### Searched 2021-10

#	Search
	site:cripcas.ca" cyber électronique " en ligne" AROUND(6)
1	violence abus agression harcèlement intimidation victimisation" cyberviolence cyberinti
I	midation cyberharcèlement fréquentations amoureux partenaires sexuelle " relations
	AROUND(2) intimes amoureuses adolescents jeunes ("école secondaire"

## **Promoting Relationships & Eliminating Violence Network**

Searched 2021-10

#	Search
1	site:prevnet.ca "cyber électronique "en ligne" AROUND(6) violence abus agression harcèlement intimidation victimisation" cyberviolence cyberinti
	midation cyberharcèlement fréquentations amoureux partenaires sexuelle " relations AROUND(2) intimes amoureuses" adolescents jeunes " école secondaire"

# Association québécoise Plaidoyer-Victimes

Searched 2021-10

#	Search
1	site:aqpv.ca "cyber électronique "en ligne" AROUND(6) violence abus agression harcèlement intimidation victimisation" cyberviolence cyberinti
	midation cyberharcèlement fréquentations amoureux partenaires sexuelle " relations
	AROUND(2) intimes amoureuses" adolescents jeunes " école secondaire"

# **APPENDIX 2 QUALITY EVALUATION CHECKLISTS**

### Ten questions for interpreting systematic reviews

- 1. Did the review address a clearly focused question? (An issue can be "focused" in terms of: the population studied, the intervention given, the outcome considered.)
- 2. Did the authors look for the right type of papers? (The best sort of studies would address the review's question and have an appropriate study design.)

Is it worth continuing?

- 3. Do you think all the important studies were included?
  - Which bibliographic databases were used
  - Follow up from reference lists
  - Personal contact with experts
  - Search for unpublished reviews or reviews published in other languages
- 4. Did the authors do enough to assess quality of the included studies? (The authors need to consider the rigour of the studies they have identified.)
- 5. If the results of the review have been combined, was it reasonable to do so?
  - Were the results similar from study to study?
  - Are the results of all the included studies clearly displayed?
  - Are reasons for any variations in results discussed?
- 6. What are the overall results of the review?
  - Do you agree with the final results?
  - What are these results (numerically if appropriate)?
  - How were the results expressed?
- 7. How precise are the results? (Look at the confidence intervals, if given)
- 8. Can the results be applied to the local population?
  - Could the subjects covered by the review be sufficiently different to your population to cause concern?
  - Is your local setting likely to differ much from that of the review?

- 9. Were all important outcomes considered?
  - Is there other information you would like to have seen?

10. Are the benefits worth the harms and costs?

• Even if this is not addressed by the review, what do you think?

Source: Critical Appraisal Skills Programme (CASP). Randomised Controlled Trials Checklist 31.05.13; French translation by the Institut national d'excellence en santé et en services sociaux available at:

https://www.inesss.qc.ca/fileadmin/doc/INESSS/DocuMetho/CASP\_RevueSystematique\_FR2013V 14012015.pdf

## Twelve questions for interpreting cohort studies (longitudinal)

- 1. Did the review address a clearly focused question? Did the review address a clearly focused question? (A question can be "focused" in terms of the population studied, the risk factors studied, the outcomes considered, if the authors clearly state whether they tried to detect a beneficial or harmful effect.)
- 2. Was the cohort recruited in an acceptable way? (We're looking for selection bias which might compromise the generalizability of the findings.)
  - Was the cohort representative of a defined population?
  - Was there something special about the cohort?
  - Was everybody included who should have been?

## Is it worth continuing?

- 3. Was the exposure accurately measured to minimize bias?
  - Did the authors use subjective or objective measurements?
  - Do the measurements truly reflect what they are supposed to? Have they been validated?
  - Were all the subjects classified into exposure groups using the same procedure?
- 4. Was the outcome accurately measured to minimize bias?
  - Did the authors use subjective or objective measurements?
  - Do the measurements truly reflect what they are supposed to? Have they been validated?
  - Has a reliable system been established for detecting all the cases (for measuring disease occurrence)?
  - Were the measurement methods similar in the different groups?
  - Were the subjects and/or the outcome assessor blinded to exposure (does this matter)?
- 5. Have the authors:
  - Identified all important confounding factors?
  - taken account of potential confounding factors in the design and/or analysis? (Look for restriction in design and techniques, e.g., modelling or stratified-, regression-, or sensitivity analysis to correct, control, or adjust for confounding factors.)
- 6. Was the follow up of the subjects:
  - complete enough?
  - long enough?

The good or bad effects should have had long enough to reveal themselves.

The persons that are lost to follow-up may have different outcomes than those available for assessment.

In an open or dynamic cohort, was there anything special about the outcome of the people leaving, or the exposure of the people entering the cohort?

- 7. What are the results of this study?
  - What are the bottom-line results?
  - Have the authors reported the rate or the proportion between the exposed/unexposed subjects and explained difference?
  - How strong is the association between exposure and outcome (RR)?
  - What is the absolute risk reduction (ARR)?
- 8. How precise are the results? (Look for the range of the confidence intervals, if given.)
- 9. Do you believe the results?
  - Big effects are hard to ignore!
  - Could the result be due to bias, chance, or a confounding factor?
  - Are the design and methods of this study sufficiently flawed to make the results unreliable?
  - Consider the Bradford Hills criteria (e.g., time sequence, dose-response gradient, consistency).

10. Can the results be applied to the local population?

- Could the subjects covered by the review be sufficiently different to your population to cause concern?
- Is your local setting likely to differ much from that of the review?
- 11. Do the results of this study fit with those of previous studies?
- 12. What are the implications of this study for practice?

Source: Critical Appraisal Skills Programme (CASP). Randomised Controlled Trials Checklist 31.05.13; French translation by the Institut national d'excellence en santé et en services sociaux available at:

https://www.inesss.qc.ca/fileadmin/doc/INESSS/DocuMetho/CASP\_cohorte\_FR2013\_V14012015. pdf

### Ten questions for interpreting case-control studies

- 1. Did the review address a clearly focused question? (A question can be "focused" in terms of the population studied, the risk factors studied, whether the study tried to detect a beneficial or harmful effect.)
- 2. Did the authors use an appropriate method to answer their question?
  - Is a case control study an appropriate way of answering the question under the circumstances?
  - Did the study address the study question?

### Is it worth continuing?

- 3. Were the cases recruited in an acceptable way? (We're looking for selection bias which might compromise the generalizability of the findings.)
  - Is the sampling method adequately defined?
  - Were the cases representative of a defined population (geographically and/or temporally)?
  - Was there a reliable system for selecting all the cases?
  - Are they incident or prevalent?
  - Is there something special about the cases?
  - Is the time frame of the study relevant to disease/exposure?
  - Was there a sufficient number of cases selected?
- 4. Was the exposure accurately measured to minimize bias? (We are looking for measurement, recall, or classification bias.)
  - Was the exposure clearly defined and accurately measured?
  - Did the authors use subjective or objective measurements?
  - Do the measurements truly reflect what they are supposed to? (Have they been validated?)
  - Were the measurement methods similar in the cases and controls?
  - Did the authors of the study incorporate blinding where feasible?
  - Is the temporal relation correct? (Does the exposure of interest precede the outcome?)

## **Confounding factors**

- What confounding factors have the authors accounted for? (Make a list of factors you consider important that the authors missed: genetic, environmental, socio-economic.)
- Have they taken account of potential confounding factors in the design and/or analysis? (Look for restriction in design and techniques, e.g., modelling or stratified-, regression-, or sensitivity analysis to correct, control, or adjust for confounding factors.)

- 5. What are the results of this study?
  - What are the bottom-line results?
  - Is the analysis appropriate to the design?
  - How strong is the association between exposure and outcome (examine the odds ratio)?
  - Are the results adjusted for confounding? Might confounding still explain the association?
  - Has adjustment made a big different to the odds ratio?
- 6. How precise are the results? How precise is the estimate of risk?
  - Size of p-value or confidence intervals; have the authors considered all the important variables? How did they evaluate the effect of individuals refusing to participate?
- 7. Do you believe the results? (Points to consider: a big effect is hard to ignore; could the result be due to bias, chance, or a confounding factor?)

Are the design and methods of this study sufficiently flawed to make the results unreliable? Consider the Bradford Hills criteria (e.g., time sequence, dose-response gradient, consistency).

- 8. Can the results be applied to the local population? (Could the subjects covered by the review be sufficiently different to your population to cause concern?) Is your local setting likely to differ much from that of the review? Can you estimate the local benefits and harms?
- 9. Can the results be applied to the local population?
  - Could the subjects covered by the review be sufficiently different to your population to cause concern?
  - Is your local setting likely to differ much from that of the review?
  - Can you estimate the local benefits and harms?

Source: Critical Appraisal Skills Programme (CASP). Randomised Controlled Trials Checklist 31.05.13; French translation by the Institut national d'excellence en santé et en services sociaux available at

https://www.inesss.qc.ca/fileadmin/doc/INESSS/DocuMetho/CASP\_Cas\_temoins\_FR2013\_V14012 015.pdf

# APPENDIX 3 PRISMA PUBLICATION SELECTION DIAGRAM



Links to the guide <u>Organigramme de la recherche documentaire : Guide d'élaboration étape par étape</u> and <u>organigramme PRISMA 2009</u> [resources in French].

# APPENDIX 4 SUMMARY OF THE SELECTED PROGRAMS AND STUDIES

Authors	Program	Program objectives	Program structure	Measurements	Study characteristics	Results (related to youth cyber dating violence)
Ortena-Baron et al 2021	net	<ul> <li>General objectives:</li> <li>Prevent online relationship risks (cyberbullying, sexting, online grooming, cyber dating violence)</li> <li>Prevent risks related to dysfunctional internet use (problematic internet use, online gambling disorder, video game addiction, smartphone addiction)</li> <li>Act to prevent victimization</li> <li>Specific objectives:</li> <li>Raise young people's awareness about the characteristics of technology that can entail risks and provide them with skills intended to prevent cybervictimization and prevent dysfunctional internet use</li> <li>Educate young people about the seriousness of the risks involved in online relationships and the risks that result more broadly from dysfunctional internet use, and provide them with advice on the safe use of information and communication technologies</li> <li>Promote aptitudes, skills, and abilities in youth so that they can better confront internet risks</li> </ul>	<ul> <li>Type of program: School-based prevention program Program activities:</li> <li>16 one-hour sessions divided into 4 modules (individual modules for each specific objective)</li> <li>Each session is divided into 4 defined sections: 1) presentation of information specific to the type of risk addressed (e.g., cyber dating violence), 2) an individual or group activity intended to change attitudes and behaviours, 3) "cyber tips," and 4) group reflection on what was learned in the session</li> <li>Facilitator training:</li> <li>The facilitators were teachers who had received 30 hours of training on an online platform (the program's website) containing all required training resources, such as written material, documentation, activities, and videos</li> </ul>	<ul> <li>violence:</li> <li>Victimization Scale of the Online Partner Abuse Questionnaire (11 items that measure control behaviours and direct aggression received by the partner</li> </ul>	Population: Students aged 11 to 14 Sample: 165 young people (M = 12.11; SD = 0.89)	<ul> <li>Effects on youth cyber dating violence:</li> <li>No effect on youth cyber dating violence victimization</li> <li>Effects on specific online relationship risks:</li> <li>Buffering effect mitigating the natural increase of cyberbullying over time (pre-test-post-test: η2 = 0.076) and compared to the control group at posttest (η2 = 0.012)</li> <li>Buffering effect mitigating the natural increase online grooming, problematic internet use, and video game addiction, and a decrease in smartphone addiction</li> </ul>

Authors	Program assessed	Program objectives	Program structure	Measurements	Study characteristics	Results
Carrascosa et al., 2019	Developing Healthy and Egalitarian Adolescent Relationships (DARSI)	<ul> <li>General objectives:</li> <li>Prevent offline and online violence among youth (aged 12 to 17) in their peer relationships and dating relationships</li> <li>Act to prevent perpetration</li> <li>Specific objectives:</li> <li>Educate youth about the consequences of violence</li> <li>Develop young people's critical thinking about sexist attitudes and myths about romantic love</li> <li>Inform youth of the personal and social resources available to them</li> </ul>	<ul> <li>program</li> <li>Program activities:</li> <li>12 one-hour sessions</li> <li>Types of activities: role-playing, writing activities, case studies, and guided discussions</li> <li>Materials: audiovisual materials, songs, drawings, and stories</li> </ul>	<ul> <li>Measurements related to youth cyber dating violence:</li> <li>Scale of Cyber- aggressions Among Peers (24 items measuring aggressive behaviours, bullying, identity theft, insults and threats online)</li> <li>Other relevant measurements:</li> <li>School Aggression Scale (25 items that measure direct and indirect aggression)</li> <li>Romantic Love Myth Scale; Ambivalent Sexism Inventory for Adolescents</li> </ul>	Measurement periods:	<ul> <li>Effects on youth cyber dating violence:</li> <li>No effect on youth cyber dating violence perpetration</li> <li>Only impacts on risk factors associated with youth cyber dating violence:</li> <li>Decrease in the perpetration of aggressive behaviours toward peers (direct violence: n2 = 0.103; and cyberviolence: n2 = 0.093)</li> <li>Decrease in sexist attitudes and beliefs in myths about romantic love</li> </ul>

Authors	Program assessed	Program objectives	Program structure	Measurements	Study characteristics	Results
Sánchez-Jiménez et al., 2018	Dat-e Adolescence	<ul> <li>General objectives:</li> <li>Prevent offline and online youth dating violence (youth aged 11 to 19)</li> <li>Act to prevent perpetration and victimization</li> <li>Specific objectives:</li> <li>Educate youth about healthy behaviours to adopt in dating relationships</li> <li>Improve the recognition, expression, and regulation of emotions</li> <li>Improve communication skills</li> <li>Promote coping and conflict resolution strategies in violent situations (online/offline)</li> <li>Educate youth about peer pressure and bystander influence in situations of dating violence</li> </ul>	<ul> <li>Type of program: School-based prevention program</li> <li>Program activities:</li> <li>7 one-hour sessions</li> <li>The last 2 sessions are led by students with the researchers' support</li> <li>Types of activities (online and in the classroom): role-playing, videos, debates, decision- making games, presentations, group dynamic exercises</li> <li>Student volunteer training:</li> <li>The program is led by research staff, except for the last 2 sessions</li> <li>The students selected to lead the last 2 sessions received 4 hours of training</li> </ul>	<ul> <li>youth cyber dating violence:</li> <li>Cyber Dating Abuse Survey (9 items measuring the frequency of violent behaviours perpetrated and experienced online in dating relationships)</li> <li>The online intimacy scale from the Cyberdating Q-A instrument (3 items</li> </ul>	Country: Spain Population: Students aged 11 to 19 Sample: 1,764 young people (M = 14.73; SD = 1.34) Measurement periods: 2 (pre-test and post-test) Control group: 1 Limitations: • Only 2 measurement times (no long-term evaluation, e.g., after 6 months or 1 year) • Non-random sample	Effects on youth cyber dating violence: • No effect on youth cyber dating violence perpetration or victimization Only impacts on risk factors associated with youth cyber dating violence: • Decrease in acceptance of beliefs in myths about romantic love • Improvement in self- esteem and emotional regulation skills, including anger management

Authors	Program assessed	Program objectives	Program structure	Measurements	Study characteristics	Results
Muñoz-Fernández et al., 2019		lbid.		<ul> <li>[Youth cyber dating violence not directly measured]</li> <li>Other relevant measurements:</li> <li>Conflict Tactics Scale (9 items measuring the frequency of physical violence behaviours perpetrated and experienced in a dating relationship in the preceding 6 months)</li> <li>Sexual dating violence measure (4 items measuring the frequency of sexual violence behaviours perpetrated and experienced in a dating relationship in the preceding 6 months)</li> <li>Sexual dating violence measure (4 items measuring the frequency of sexual violence behaviours perpetrated and experienced in a dating relationship in the preceding 6 months)</li> <li>European Bullying Intervention Project Questionnaire (14 items measuring the frequency of threatening behaviours perpetrated and exprienced in a dating relationship in the preceding 2 months)</li> </ul>	Country: Spain Population: Students aged 11 to 19 Sample: 1,423 young people (M = 14.98; SD = 1.39) Measurement periods: 3 (before the program, and 6 months after the program) Control group: 1 Limitations: • Does not directly measure cyberviolence committed in a dating context	<ul> <li>Effects on youth cyber dating violence:</li> <li>No effect on youth cyber dating violence perpetration or victimization</li> <li>Effects on offline violence:</li> <li>Decrease in serious physical violence victimization (d = 0.21) and perpetration (d = 0.25) in dating relationships</li> <li>Decrease in sexual violence victimization (d = 0.24) and perpetration (d = 0.38) in dating relationships</li> <li>Decrease in bullying victimization (d = 0.98) in dating relationships</li> </ul>

Authors	Program assessed	Program objectives	Program structure	Measurements	Study characteristics	Results
Fernàndez-Gonzàlez et al., 2020		<ul> <li>cyber dating violence</li> <li>Act to prevent perpetration and victimization</li> <li>Specific objectives:</li> <li>Act on risk and protective factors related to dating violence:</li> <li>Reduce aggression toward peers</li> <li>Promote prosocial behaviours like respect and friendliness toward others</li> <li>Encourage empathy, self-esteem, and self-confidence in stressful situations, while reducing negative feelings</li> </ul>	Brief group intervention in a school setting	<ul> <li>Measurements related to youth cyber dating violence:</li> <li>Original measurement scale:</li> <li>14 items intended to measure violence behaviours perpetrated and experienced in person by a partner or ex-partner in the 6 preceding months</li> <li>11 items intended to measure violence behaviours perpetrated and experienced on ine asure violence behaviours perpetrated and experienced online by a partner or ex-partner in the 6 preceding months</li> </ul>	Country: Spain Population: Students (age range not provided) Sample: 123 young people (M = 15.20; SD = 0.99) Measurement periods: 3 (pre-test, 6 months after, and 1 year after the program) Control group: 1 (an intervention regarding the functioning of the human brain) Limitations: • Small sample	<ul> <li>Effects on youth cyber dating violence perpetration:</li> <li>Decrease in the perpetration of cyberviolence in dating relationships 6 months (d = 0.27) and 1 year after the intervention (d = 0.54)</li> <li>No effect on youth cyber dating violence victimization</li> <li>Effects on violence perpetrated offline:</li> <li>Decrease in the perpetration of violence offline 6 months (d = 0.37) and 1 year after the intervention (d = 0.74)</li> </ul>

Authors	Program assessed	Program objectives	Program structure	Measurements	Study characteristics	Results
Rothman et al., 2020		offline and online violence	<ul> <li>Type of program: Brief, personalized, one-on-one intervention</li> <li>Program activities: One 30- to 45-minute motivational interviewing-style session with follow-up booster sessions</li> <li>The objective of the brief intervention is to help the young person reflect on their readiness to change their behaviours and examine and use strategies to act less aggressively toward a partner</li> <li>The young person is contacted up to 3 more times in the 6 weeks following the initial session to receive a "booster" call of around 10 minutes, which serves as a reminder of the intervention plan, its content, and the strategies developed</li> <li>Facilitator training:</li> <li>The facilitators were individuals from the local community with experience in youth dating violence, specifically master's students in public health</li> <li>20 hours of training, delivered by the lead researcher</li> <li>The training aimed to familiarize the facilitators with the methods for motivational-style interviews and brief interventions through readings, videos, and role-playing</li> </ul>	<ul> <li>Only one question measured cyberviolence, addressing checking a partner's emails or cell phone without their consent</li> <li>Other relevant measurements:</li> <li>Original measurement scale (23 items measuring the frequency of perpetration of physical, sexual, psychological, and online violence toward a dating or sexual partner in the preceding 3 months)</li> </ul>	Population: Youth aged 15 to 19 who had sought medical care (at a hospital or outpatient clinic) and who had committed a violent act toward a partner in the preceding 3 months Sample: 172 young people Control group: 1 (information booklet on the perpetration of dating	<ul> <li>Effects on youth cyber dating violence perpetration:</li> <li>Decrease in the perpetration of dating violence after 3 months (RR = 0.39)</li> <li>No effect observed after 6 months</li> <li>Effects on psychological violence perpetration:</li> <li>Decrease in the perpetration of psychological violence after 3 months (RR = 0.24)</li> </ul>

Authors	Program assessed	Program objectives	Program structure	Measurements	Study characteristics	Results
Rizzo et al., 2018	ationships for Teens)	<ul> <li>behaviour, and offline and online in youth cyber dating violence of adolescent girls with previous exposure to dating violence</li> <li>Act to prevent perpetration and victimization</li> <li>Specific objectives:</li> <li>Act on factors that have been associated with both dating violence</li> </ul>	<ul> <li>Group intervention</li> <li>Program activities:</li> <li>Six 2-hour group sessions (based on the principles of cognitive behavioural therapy and a trauma-informed approach), with one booster session, intended to:</li> <li>Provide skills, in the form of a toolkit, to better manage situation of mutual violence and unprotected sex</li> <li>Hold discussions on choosing partners</li> </ul>	<ul> <li>Social Networking and Controlling Behaviors Survey (developed for this study): 6 items measuring cyber dating violence perpetration and victimization (e.g., asking for a partner's password, feeling jealous after reading a partner's social media profile)</li> <li>Other relevant measurements:</li> </ul>	Country: United States Population: Adolescent girls aged 14 to 17 (who had been exposed to violence in a dating relationship) Sample: 109 adolescent girls (M = 15.75; SD = 0.94) Comparison group: 1 (program with the same format as Date SMART, but without skill buidling) Measurement periods: 4 (pre-test, 3 months after, 6 months after the program) Limitations: • Small sample • Youth cyber dating violence questions only addressing controlling behaviours • Comparison group participated in an intervention similar to Date SMART	<ul> <li>Effects on youth cyber dating violence:</li> <li>No effect on youth cyber dating violence perpetration or victimization</li> <li>Effects on sexual violence:</li> <li>Decrease in sexual violence victimization and perpetration 9 months after the intervention (d = -0.55)</li> </ul>

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