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A Review of Intimate Partner Violence Interventions Relevant to Women During the COVID-19 Pandemic

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Abstract
Women have experienced increased rates of intimate partner violence (IPV) since the onset of the COVID-19 global pandemic, and at the same time requirements for physical distancing and/or remote delivery of services have created challenges in accessing services. We synthesized research evidence from 4 systematic reviews and 20 individual studies to address how IPV interventions can be adapted within the context of the pandemic. As many interventions have been delivered via various technologies, access to technology is of particular importance during the pandemic. Our results can inform the provision of services during the remainder of the COVID-19 pandemic including how to support women who have little access to in-person services.

Keywords
COVID-19, intimate partner violence, services, technology

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Introduction

The message "Go home and stay home" has been a consistent narrative from many elected leaders and public health officials during times when COVID-19 case numbers are high in their jurisdictions. During the COVID-19 pandemic, many women who are experiencing intimate partner violence (IPV) have had greater periods of isolation at home with abusers, and/or are at risk of IPV due to increased stress on individuals and families. Evidence from the World Health Organization shows that violence against women often increases during every type of emergency, and especially during global crises such as the COVID-19 pandemic (World Health Organization, 2020). A recent systematic review of 18 studies from the United States and 8 additional countries reported an increase in reports of domestic violence since stay-at-home or lockdown orders related to COVID-19 were implemented (Piquero et al., 2021). Intimate partner violence can have a detrimental impact on women including physical, mental, and sexual health problems (Bonomi et al., 2006; Ulloa & Hammett, 2016), and studies have begun to emerge documenting these impacts specifically related to COVID-19 (Sediri et al., 2020).

We define IPV as any type of abusive behavior (e.g., emotional, verbal, physical, sexual) that occurs between current or former intimate partners, such as spouses or those in romantic relationships. IPV is the most common form of violence that women experience; women account for 80% of those who experience IPV and 84% of IPV occurs in a private dwelling (Conroy et al., 2019). IPV among women is a problem that persists regardless of socioeconomic class, religious affiliation, race, ethnicity, or age (Rennison & Rand, 2003), although certain groups can be disproportionately affected (Steele et al., 2020).

IPV services are commonly offered in-person (e.g., individual and group counseling and support) and/or involve physically moving to short- and long-term protective housing (e.g., emergency shelters, second-stage housing) (Weeks et al., 2021). Due to the COVID-19 pandemic, many of these supports were diminished due to public health restrictions and regulations. This resulted in many organizations being unable to provide in-person services at their full capacity, if at all, due to challenges related to physical distancing within these settings (Bogart, 2020; Enright, 2020). There is increased research evidence about IPV services offered using information and communication technologies, such as videoconferencing and telehealth (Goldstein et al., 2017; Rempel et al., 2019), but women experiencing IPV may not have access to technology or have the ability to safely use technology, especially if their abuser is at home for prolonged periods (Zaidi et al., 2015). Our team synthesized research evidence about how IPV services can be effectively and safely delivered within the context of the COVID-19 global pandemic.

Through a preliminary literature search, we identified two relevant and interconnected bodies of research knowledge related to COVID-19: (1) the use of information and communication technologies in the provision of IPV services (El Morr & Layal, 2019; Ford-Gilboe et al., 2017; Hassija & Gray, 2011; Murray et al., 2015; Westbrook, 2007; Zaidi et al., 2015) and (2) research on the provision of IPV services that do not require in-person contact with diverse populations living in rural and/or remote contexts in

both high and low-resource countries (Hughes, 2010; Neill & Hammatt, 2015; Shepherd, 2001; Strand & Storey, 2019; Wild et al., 2019; Zorn et al., 2017).

We conducted a search of PROSPERO, MEDLINE, the Cochrane Database of Systematic Reviews, and in addition the JBI Database of Systematic Reviews and Implementation Reports, and no current or in progress systematic reviews were identified that specifically focused on providing IPV services during the COVID-19 pandemic. The PROSPERO database includes a specific filter for registrations related to COVID-19. One rapid review that was ongoing at the time of our search, and recently completed, focused on the associations between social and geographical isolation and IPV, although not specifically focused on services provided during the COVID-19 pandemic (Mojahed et al., 2021). A recently completed rapid scoping review focused on interventions to promote gender equality in public health emergencies, such as economic empowerment, health promotion, and resettlement programs (Steinert et al., 2021).

To support the adaption of supports and services during the COVID-19 pandemic, we synthesized available research evidence to address the following primary research question: *How can IPV services/interventions for women across the lifespan be adapted within the context of COVID-19 where physical distancing and/or remote delivery of services are required?* In addition to the existence of services that can be adapted within the COVID-19 context, it is also important to identify if these services have a positive impact on women's lives and if women are willing and able to use these services. Thus, we also addressed two secondary questions in this review: *What evidence exists for the impact of the identified services on the health and safety needs of women? What evidence exists for the feasibility and acceptability of the services identified?*

The results of this review will inform the adaption and expansion of services during the remainder of the COVID-19 pandemic and any other situations that require physical distancing and/or remoted delivery of services. In addition, the results may inform further innovations in providing IPV services for people who do not wish to access in-person service delivery even when physical distancing measures are not in place, or who cannot access in-person services for various reasons (e.g., people living in rural and remote places where in-person services are limited).

Theoretical Perspectives

The categories used to organize the interventions included in this review were developed from two theoretical perspectives: (1) levels of prevention (i.e., primary, secondary, and tertiary; Issel, 2014; Weiss & Koepsell, 2014) and (2) reclaiming self-theory (Merritt-Gray & Wuest, 1995; Wuest & Merritt-Gray, 1999, 2001). Both theoretical perspectives have been recently utilized to organize IPV interventions in systematic reviews (Anderson et al., 2021a; Rempel et al., 2019).

Primary, secondary, and tertiary levels of prevention have been utilized broadly to conceptualize various forms of interventions, often related to health promotion (Issel, 2014). These levels are used to identify how to prevent a problem from occurring and addressing underlying causal factors (i.e., primary prevention), screening and early detection to implement early interventions to reduce impact and/or recurrent exposure

Levels of prevention	Reclaiming self theory	Categories used in this review
Primary prevention	n/a	Preventing IPV
Secondary prevention	1) Counteracting abuse	Identifying and documenting IPV
Tertiary prevention	1) Counteracting abuse 2) Breaking free stage 3) Not going back 4) Moving on	Supporting women while living with and/or leaving an abusive partner Supporting women after leaving an abusive partner

(i.e., secondary prevention), and mitigating the impacts of current or previous experiences of IPV (i.e., tertiary prevention).

Reclaiming self-theory (Merritt-Gray & Wuest, 1995; Wuest & Merritt-Gray, 1999, 2001) has four stages: (1) "counteracting abuse" where women tend to relinquish valued parts of their self-identity, minimize their abuse, and fortify their defences to leave the relationship; (2) "breaking free" where women physically leave the relationship; (3) "not going back" to the abusive relationship; and (4) "moving on" stage after leaving an abusive relationship.

We utilized the levels of prevention and reclaiming self-theory (e.g., the specific stages women go through in leaving an abusive partner) to develop the four categories used in this review to organize interventions: preventing IPV; identifying and documenting IPV; supporting women while living with and/or the process of leaving an abusive partner; and supporting women after leaving an abusive partner.

Methods

We adapted Joanna Briggs Institute (JBI) systematic review methodology for conducting umbrella reviews (i.e., reviews of reviews) and mixed-methods reviews (Aromataris et al., 2020; Aromataris & Munn, 2020; Peters et al., 2020). JBI is a not-for-profit research institute located at the University of Adelaide and the mission is to facilitate the synthesis, transfer, and implementation of the best available evidence to ensure the feasibility, appropriateness, meaningfulness, and effectiveness of policy and practice related to health (www.jbi.global).

Inclusion Criteria

In this review, we included empirical research of IPV interventions that could be advantageous within the context of the COVID-19 pandemic, such as interventions utilizing physical distancing or remote delivery of services, many of which involve utilizing information and communication technologies. Sources included quantitative and qualitative study designs including published peer-reviewed studies, systematic reviews, and theses and dissertations. We also included media reports of IPV interventions developed or adapted since the onset of the COVID-19 pandemic, but these results were reported

separately from the current article (Weeks et al., 2020). Due to the language capacity of our research team, only sources published in English or French were included. We included studies that included IPV interventions provided to women, and those who identify as women; we did not include studies focused specifically on girls.

Search Strategy

An initial limited search of MEDLINE, CINAHL, and Embase was undertaken followed by an analysis of the text words contained in the title and abstract, and of the index terms used to describe the article. A second search using all identified keywords and index terms was undertaken across all included databases CINAHL, MEDLINE, Gender Studies Database, Embase, PsychInfo, and NexisUni (media reports). The final search strategy of the databases was conducted in May 2020, except for NexisUni conducted in June 2020. Sources published since the inception of databases were included.

Study Selection

Following the implementation of the search strategy, all identified citations were collated and uploaded into Covidence systematic review software (Veritas Health Innovation, Melbourne, Australia) and duplicate were removed. Titles and abstracts were then screened by two independent reviewers against the inclusion criteria for the review. The full text of sources was retrieved for potentially relevant studies. Two independent reviewers assessed the full text of selected citations against the inclusion criteria. Reasons for the exclusion of full-text studies that did not meet the inclusion criteria were recorded. Any disagreements that arose between the reviewers at each stage of the study selection process were resolved through discussion, or with a third reviewer. The results of the search are presented in a Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) flow diagram (Page et al., 2021).

Data Extraction

The data extracted included specific details about the study characteristics including the study methods and key findings. We extracted any data included in the studies related to the impact of the interventions on mental well-being, physical health, and safety needs of women. We also extracted results related to the feasibility and acceptability of interventions. The data extraction tool was developed by the research team and pilot tested by having multiple reviewers completing data extraction and discussing the results at a virtual team meeting. Following established practices (Pandor et al., 2019; Tricco et al., 2017), one reviewer extracted all descriptive data from each included source (e.g., describing the interventions, study methods, sample characteristics), and the first author reviewed and verified these data. Two independent reviewers extracted data for all quantitative and qualitative outcome data (e.g., health impacts of interventions, feasibility, acceptability). Any disagreements between the reviewers were resolved through discussion, or with a third reviewer.

Results

The results have been divided into two sections. In the first section of the results, we include a description of the results of the search and the included studies. In the second section of the results, we include results about the outcomes of the interventions from the included studies.

Search Results and Description of the Included Studies

In this section, we include the search results, characteristics of the included studies, characteristics of the interventions in the included studies, and our theoretical categorization of the interventions.

Search Results

A total of 10,788 titles were identified. Of these, 4,266 were duplicates. At the title and abstract screening phase, 6,522 sources were screened, with 6,245 sources were found irrelevant. A total of 277 sources were assessed for eligibility through full-text screening, and 199 were excluded (see Figure 1). Common reasons for exclusion included the intervention was not relevant to COVID-19 ($n = 60$) and/or the source did not include a report of an intervention ($n = 48$). We also excluded 36 sources at the full-text review stage if an individual study was included in one of the 4 systematic reviews included in our review. The search results reported in Figure 1 include media reports. The media reports included descriptions of initiatives to support women experiencing IPV since the onset of the COVID-19 pandemic. The results of 51 media reports were synthesized and published separately from the other sources in this review as they were not empirical sources (Weeks et al., 2020). In this article we include a synthesis of 4 systematic reviews and 20 individual studies.

Study Characteristics

The characteristics of the 4 systematic reviews are included in Table 1 (Anderson et al., 2021a; Eisenhut et al., 2020; Goldstein et al., 2017; Rempel et al., 2019). These studies were published between 2017 and 2020 by authors in the United States, Canada, and Germany. The sources included in the systematic reviews were published from 2000 to 2019.

The characteristics of the 20 individual studies are included in Table 2. Most (n = 16) of these studies were published from 2015 to 2020 with the remainder published from 1998 to 2011 (n = 4). The individual studies were published by authors located in the United States (n = 14), with others published by authors in Canada (n = 2), Australia (n = 2), Hong Kong, and Tanzania. Most were published in peer-reviewed journals (n = 15), and the remainder were doctoral dissertations (n = 3), or studies published as book chapters (n = 2). The research designs of the individual studies varied greatly including randomized controlled trials and quasi-experimental designs (n = 5), other quantitative designs (n = 2), mixed methods (n = 7), and qualitative approaches including case studies (n = 6).

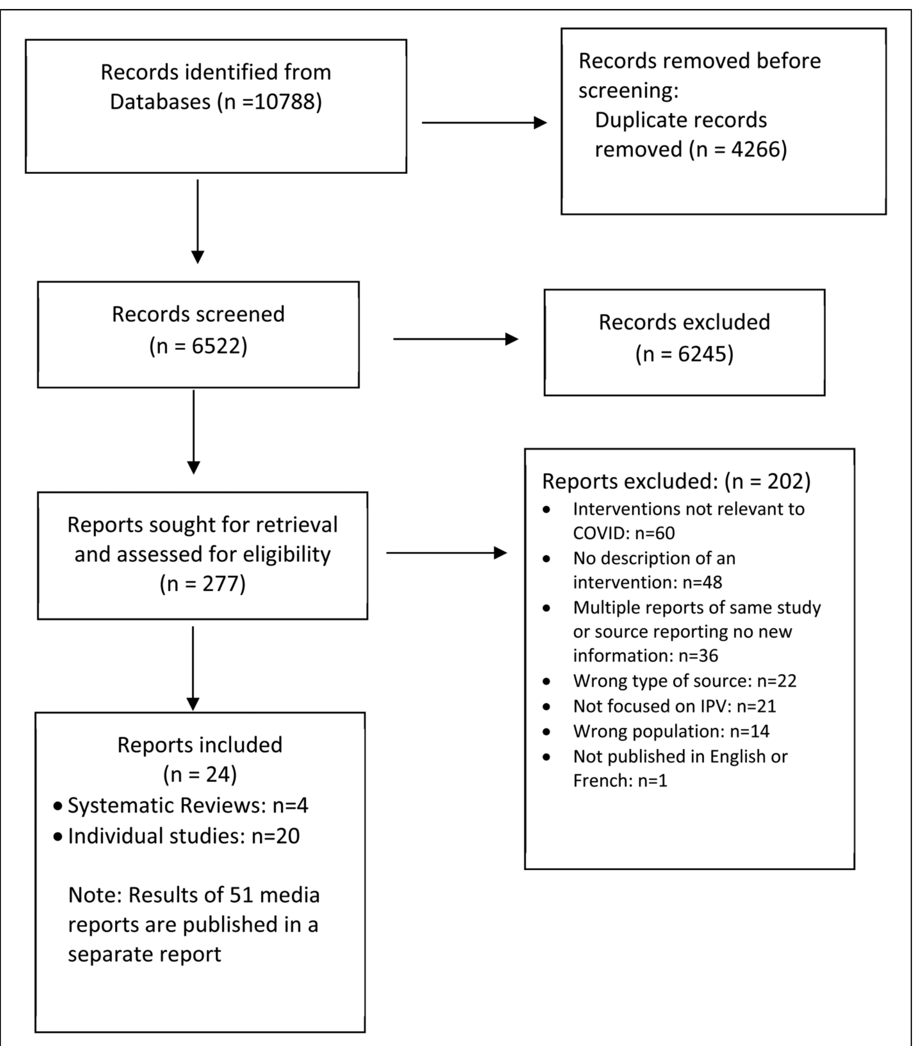

Figure 1. PRISMA diagram (Page et al., 2021).

Intervention Characteristics

Each of the 4 systematic reviews addressed technology-mediated interventions including a total of 218 sources focused on mobile health, telehealth, online tools, and digital applications (apps) targeting women experiencing violence. Three of the systematic reviews included published research (Anderson et al., 2021a; Goldstein et al., 2017; Rempel et al., 2019), and Eisenhut and colleagues (2020) conducted a systematic review of apps addressing violence against women in the five World Bank regions through searching various sources including Google, the AppStore, and Google Play (Eisenhut et al., 2020).

Table 1. Systematic Review Characteristics ($N = 4$).

Identification	Type and focus	Population	Search strategy and inclusion criteria	Search results	Sample characteristics
Anderson 2021a, USA	Systematic literature review of mobile health (mHealth) interventions that are designed for IPV victims	Adults or adolescents in adult romantic relationships, some targeted at people living in rural places	Databases (PubMed, Elsevier Embase, Cochrane Controlled Registry of Trials, EBSCO, PsycINFO, and EBSCO CINAHL); dates (1998–Feb 2019); languages (English, Spanish, French, and Portuguese); intervention types (stationary and portable computers, tablets, smartphones, or cell phones); types of studies (qualitative, quantitative, and mixed-methods)	31 included studies (23 from the USA); 84% targeted only women; 23 studies were RCTs or RCT protocols; studies published from 2005 to 2019	79% women; 85% victims; 27% more than 50% racialized; 77% English, 3% Spanish, 19% other/ not specified; age not reported
Eisenhut 2020, Germany	Systematic review on mobile health (mHealth) apps addressing violence against women (VAW) in five world regions	Women experiencing violence	Systematic Google search, systematic online search of AppStore and Google Play; databases (PubMed, Medline, The Cochrane Library, Google Scholar, and JSTOR); dates 2010–2018; languages (English, German,	171 apps included; 77% originated in the private sector; 76% of apps were available free of charge; world region of origin of the app (26% South Asia, 26% Europe/Central	83% of apps directed at women victims of violence; age not reported

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Table 1. (continued)

Identification	Type and focus	Population	Search strategy and inclusion criteria	Search results	Sample characteristics
			French, and Spanish); apps had to have 100 or more downloads	Asia, 19% North America, 13% Latin America and Caribbean, 10% sub-Saharan African, 6% Middle East and North Africa)	
Goldstein 2017, USA	Create an evidence map of telehealth services (telephone-based) designed specifically for women. There were several topics included, and one topic was intimate partner violence	Women experiencing IPV	Searched MEDLINE (via PubMed®) and Embase from database inception to 2016. Included English language peer-reviewed studies only	A total of 211 sources were included in the broader systematic review, and 5 studies focused on IPV. The studies were conducted in the United States ($n = 3$), Hong Kong, and South Africa; included studies published from 2004 to 2015	Total sample of 1,189 people across 5 studies. Mean age of 20–39 for 3 studies reporting age. The predominant ethnicity was white for 2 studies, Latina for 1 study, studies conducted in Hong Kong and South Africa did not report ethnicity
Rempel 2019, Canada	Perform a scoping review to explore online interventions available to women survivors of IPV	Women experiencing IPV and survivors of IPV	Databases (Scopus, CINAHL, Medline, grey literature searched using Google); dates 2000–2016; language (English only)	11 sources: from USA (8), New Zealand (2), Canada (1); published from 2007 to 2015	All interventions targeted at women including mothers and their children, pregnant women, rural women, and college students; age not reported

Table 2. Characteristics and Results of Individual Studies by Category (N = 20).

ID	Intervention(s)	Study methods	Sample characteristics	Results
Preventing IPV (n = 2)				
Abeid 2015, Tanzania Peer-reviewed article	An awareness-creation program utilizing radio programs, information, education, and advocacy meetings with local leaders over 8 months	Quasi-experimental study; pre- and post-intervention surveys, intervention and comparison groups; reported number of rapes through health facilities and knowledge and attitude toward sexual violence	n = 1,568 (777 intervention, 791 comparison group at baseline); about 40% male, 60% female; age range = 18–49, mean age about 30; about 10% had secondary education or higher; all rural	Increase in reports of rape; improved awareness of common perpetrators and services available; significant reduction in acceptance of violence against women
Bacchus 2016, USA Peer-reviewed article	DOVE = Domestic Violence Enhanced Home Visitation Program app version, an empowerment intervention to prevent IPV during pregnancy, embedded into perinatal home visiting programs	Qualitative semi-structured interviews and observation session; in-person and paper-based version of the program was compared the app version of the program accessed on a tabled or mobile device	n = 51: 23 home visiting staff (age 25–66), 2 computer program designers. Also 26 pregnant women age 16–35; 46% white, 31% black, 15% mixed ethnic origin; 88% spoke English, 12% spoke Spanish; 31% less than high school; most lived in rural locations	The app helped to reduce stigma and raise awareness, made it easier to talk about IPV; offered a greater sense of anonymity and privacy, more women disclosed abuse using the app vs. face-to-face; challenges with reliability of rural internet, privacy to use the app, and a video not tailored to individual circumstances
Identifying and documenting IPV (n = 8)				
Alvarez 2018, USA	A secure and private app (myPlan), interactive personalized safety decision	Qualitative descriptive study; individual interviews, on-line survey, thematic	n = 17 professionals working in urban health clinics in low-income	Overall, provided positive feedback about myPlan app as a tool for providers;

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Table 2. (continued)

ID	Intervention(s)	Study methods	Sample characteristics	Results
Peer-reviewed article	aid to help IPV survivors make safety decisions and develop a safety plan; available in Spanish and English	analysis; reported how healthcare workers identified and managed IPV disclosed during a healthcare visit and to learn how providers can include the app as a resource for women in their clinical practice	areas (e.g., nurses, physicians, social workers); 88% women; mean age = 41.7 (range = 30–64); all clinics served an 82% or more Spanish clientele	the questions were nonjudgmental and useful for helping women identify their situation as abusive; anonymity of the app was a strength health literacy of patients was a concern along with time to use the app
Cameron 2011, USA Doctoral dissertation	2 online social environments: (1) PrisonTalk Domestic Violence forum, a traditional discussion forum (2) National Coalition Against Domestic Violence Facebook fan page, dedicated to create an online space where, via technology, people can connect and offer support in a digital environment	Mixed methods case study methodology; examined the social support behaviors of participants in online IPV forums. Conducted thematic content analysis to examine the social support behaviors of participants in online forums, understand message content, and how different forums are used by survivors	Analysis of 1,631 messages (817 from the PrisonTalk Forum and 814 from the Facebook page). For PrisonTalk; 92% of messages were submitted by 226 unique users; for Facebook, 462 unique users submitted messages	Informational support largest category across both forums, with 37% of social-support segments falling into this category; followed by emotional support (28%), storytelling (18%), community building (9%), and help seeking (8%). Content analysis also revealed instances of stalking and harassment, sharing of misinformation, overly personal communications, and the enforcement of subcultural behavioral norms in the forums. There are obvious

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ID	Intervention(s)	Study methods	Sample characteristics	Results
				benefits to peer support identified through using these forums
Doherty 2017, Canada Book chapter	Self-assessment safety planning tool: (1) exploring who to tell about abuse, addressing fears about reaching out for help; (2) a checklist of risk factors to assess personal situation and possible risk for increased violence, encourages women to question their own perceptions of risk factors and to identify sources of support; (3) template for a safety plan	Qualitative validation study utilizing focus groups and interviews to explore ways the tool resonates with local service providers and addresses the social, cultural, and economic realities of women living with an abusive partner; and to identify potential users of the tool and strategies to move the tool to completion and dissemination	n = 27 participants (3 focus groups with 25 participants and 2 key informant interviews); 2 focus groups with rural crisis interveners, service providers, community agencies; 1 focus group with women in a support group for abused women; key informant interviews with people who had expertise risk assessment and safety planning tools	Positive feedback included that it addresses barriers to leaving; the accessibility of the tool for self-assessment and/or with support from a service provider; promotes ownership and internalization of the plan because due to the customization features; is not a "one-time" assessment as women are encouraged to review and strategically reassess their personal risks on a regular basis; liked that it referred to issues related to the local rural context; suggested the tool could be adapted to other rural communities and/or marginalized populations living in urban areas

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Table 2. (continued)

ID	Intervention(s)	Study methods	Sample characteristics	Results
Draucker 2019, USA Peer-reviewed article	Writing to Improve Self-in-Relationships (WISER); 4-session program completed by participants entirely online; utilized a narrative therapy strategy (called a WISER idea) to identify and challenge a problematic relational schema and provide participants an opportunity to explore how they might achieve more satisfying relationships	Mixed-methods longitudinal (baseline, after intervention, 2 months later) feasibility study to examine the usability and feasibility of the WISER program and to prepare for a clinical trial and to explore whether the program would lead to changes in problematic relational schemas, relationship quality, and intimate partner aggression	n = 14 women; all students age 18–24; 79% White, 7% Black, 7% Asian,7% Mixed race	Promising preliminary outcomes (significant reductions in psychological aggression, physical aggression, injury, and perpetration). Most means on the outcome measures changed in the predicted directions. All participants reported they believed that the WISER program helped them reflect on their relationships and make their relationships more satisfying; potential to address relational schemas, improve relationship quality, and decrease dating aggression in young adults at risk of on-going intimate partner aggression and violence
Ford-Gilboe 2020, Canada Peer-reviewed article	iCAN an interactive, tailored, online safety and health intervention; feedback on level of risk, factors about unsafe relationship; with a	Randomized controlled trial, double blind, parallel; compared the tailored, interactive intervention with a brief nontailored	n = 462 women (231 tailored intervention, 231 non-tailored intervention); mean age = 34; 13% Indigenous	Women in both intervention groups improved on outcomes over time. The comparison group received some important supports

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Table 2. (continued)

ID	Intervention(s)	Study methods	Sample characteristics	Results
	personalized detailed action plan of strategies and resources for addressing safety and health; information about symptoms of a stress reaction and strategies to manage them	version; outcomes measured at baseline and 3, 6, and 12 months via online survey including depression, decisional conflict, safety actions, mastery, self-efficacy for safety planning, social support, experiences of coercive control)	identity; 38% completed post-secondary education; 50% unemployed; 23% rural	(utilized for ethical reasons) versus a true control condition. For women with children under age 18, the tailored version was more effective in reducing symptoms of depression and PTSD, and women's experiences of coercive control. The tailored intervention was more effective for women who reported more severe violence at study entry and showed more positive outcomes for women living in larger towns and urban areas
Glass 2017, USA Peer-reviewed article	Internet Resource for Intervention and Safety; safety decision aid for abused women; completed study sessions online within 6 weeks including a tailored internet-based safety decision aid included priority-setting activities,	Randomized controlled trial; compared safety and mental health outcomes at baseline, 6 and 12 months; women randomized to the intervention or control website where they received safety information online, but not tailored	n = 725 women (365 intervention, 360 control), mean age = 33, 9.8% with a female partner; 64% White, 25% Black, 3.5% Asian, 5% Multi-racial; 1.6% Native American, 1.2% other; 11% Hispanic/	Intervention participants had significantly reduced decision conflict after one use of the intervention compared to the control group. At 12 months, there were no significant group differences in IPV, depression, or PTSD, but

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ID	Intervention(s)	Study methods	Sample characteristics	Results
	risk assessment (including danger assessment tools), and tailored feedback and safety plans	feedback. Completed the Decision Conflict Scale, safety behaviors, Severity of Violence Against Women Scale, depression and PTSD measures	Latina; 21% high school diploma or less	intervention women had a greater increase in safety behaviors and were more likely to have left the abusive partner; intervention group had significantly greater initial reductions in decisional conflict, but no significant difference at 12 months. The intervention is a promising tool to reduce the public health impact of IPV
Hatch 2020, USA Peer-reviewed article	Texts 4 Romantic Relationships; daily text message prompt intended to change behaviors within their relationship for 28 days; twice received additional "safety" text about how to end study participation and seek help; final assessment on day 30	Randomized control trial; measures at baseline and at day 30; measured couples satisfaction depression, Revised Conflict Tactics Scales, sexual satisfaction, Self-Regulation for Effective Relationships, communication patterns, 10 Likert questions about satisfaction with and utility of the text messages (for those in the intervention)	n = 461 (231 treatment, 230 control); 73% female, 27% male; 92% heterosexual, 5% bisexual, 1% homosexual; 2% other or prefer not to say; all university students mean age = 20.4 (SD 2.1); 68% White, 9% Asian, 4% were Black, 1% Native American, 18% other	The intervention received positive feedback from the participants but failed to produce reliable changes on relationship constructs, relationship satisfaction, sexual satisfaction, constructive communication, relationship effort, relationship strategies, and depressive symptoms. Future studies should

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ID	Intervention(s)	Study methods	Sample characteristics	Results
				consider assessing the extent to which participants completed the actions suggested in the texts and encourage completion of suggested activities
Khaki 2016, USA Doctoral dissertation	Identification and Referral to Improve Safety (IRIS); internet-based safety decision aid with abused women to inform them about the danger in their relationships, to offer them privacy in assessing their individual safety options, and to allow them to revisit the aid as often as necessary through a secure internet site	Randomized controlled trial; computerized data collection; demographics, safety-seeking behaviors utilized, resources used in the past, decisional conflict scale, tool to set priorities for safety. Collected data at baseline and 12 months. Control group members only received a standard safety plan	n = 154 women (76 control, 78 intervention); age range = 18–59 (45% 19–29, 25.6% 30–30 years old, 21.3% 40–49, 7.9% 50–59); 52% African American, 48% White, 70% earned $1,500 or less/month	Intervention participants were more likely to find safety seeking helpful, but this was not statistically significant (60% vs. 52%), and there was no difference for African American or White participants. The perception of intervention helpfulness was significantly higher among African American Women than White Women (60% vs 50%). No significant difference for race on the danger score. Further research with larger sample sizes, particularly including African American women

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ID	Intervention(s)	Study methods	Sample characteristics	Results
Supporting women while living with and/or leaving an abusive partner (n = 6)				
Anderson 2021b, USA Peer-reviewed article	bMOREsafe app developed by Mercy Medical Centre's Forensic Nurse Examiner Program (Baltimore, MD) to assist college-age students and community members who were seeking help following an incident or sexual assault or IPV; in English and Spanish	Mixed methods study; online survey with students and semi-structured interviews with healthcare providers; gather feedback on the acceptability, usability, and dissemination options for the app	n = 55; 49 student participants, (84% female; mean age 22.4; 69% Caucasian; 16% Hispanic, 12.2% Asian, 12.2% Mixed/other, 6.1% African American); and 6 service providers (all women; mean age 29.8; 83% Caucasian, all non-Hispanic); all urban	Student participants overall found the app useful and applicable and wanted to hear about it through peers or social media. Healthcare providers found the design unintimidating and had overall positive utility. Access to a device after abuse may be problematic, high literacy level needed, not clear inclusivity for the diverse needs (e.g., LGBT +, new immigrants, refugees)
Burge 2017, USA Peer-reviewed article	Women experiencing moderate IPV completed a daily phone automated survey on their relationship; a researcher called them weekly to check in for 12 weeks; received community resources for partner violence	Longitudinal mixed methods study; telephone survey about their relationships each day for 12 weeks; sub-sample completed an open-ended interview about their experiences during the project at end-of-study; assessed women's evolving attitudes, health outcomes, and	n = 144 women (42 participated in an interview); mean age = 39 (SD = 11.1); 76% Hispanic, 19% White, 4% African American, 1% other; 55% low income	Personal control over the violence increased; violence became more predictable; hope increased significantly over time; decreased acceptance and denial of the violence; readiness to leave the relationship increased, social symptoms improved significantly, and

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Table 2. (continued)

ID	Intervention(s)	Study methods	Sample characteristics	Results
		relationship decision-making, social support, and stress		psychological symptoms improved somewhat, significant improvement in mental health; positive insights into the relationship, positive emotional change, positive change in own behavior and the relationship, greater access to resources, and more positive decision-making
Chidanand, 2014, USA Doctoral dissertation	Focusing-Oriented Arts Therapy adapted to an internet format (FOAT-IP); integrative well-being adjunct tool in working with clients who have not been acculturated to psychotherapy; integrates focusing-oriented therapy and expressive arts to facilitate emotional and spiritual healing	Pre-and-post-test quantitative design with control group; 4-week pilot study; 4 quantitative measures utilized (Perceived Stress Scale, State Trait Anxiety Inventory, Beck Depression Inventory, and Positive State of Mind)	n = 16 women of South Asian (Indian) descent living in USA (13 intervention, 13 control); mean age = 36 (SD = 9.7); 56% born in India; 38% Indian native language; 75% Hindu; highly educated, all had at least a bachelor's or professional degree; 12.5% income less than $25,000/year	The depression measure was the only one to yield significant results; 47% of the participants' improvement may be attributed to the FOAT-IP intervention; due to small sample size, other findings were inconclusive, but pilot results suggest that FOAT-IP is feasible and potentially efficacious to reduce depression in South Asian Women; provides opportunities to work

(continued)

Table 2. (continued)

ID	Intervention(s)	Study methods	Sample characteristics	Results
				through emotions without any self-disclosure; may be culturally more accessible to women not acculturated to traditional talk therapy
Chu 2021, Hong Kong Peer-reviewed article	Baidu Tieba's IPV Group; a Chinese social network site that allows group members to communicate through public or private messaging; the online community is for IPV victims to share their experiences and to seek suggestions from community members	1) Exploratory quantitative content analysis of social support (and perpetrator blame messages using a python web crawler and Chinese coders; coded for gender where possible. 1) employed automatic content analysis using supervised machine learning and topic modeling to examine the themes discussed	8,343 messages analyzed in study 1, and 51,046 messages analyzed in study 2; where gender could be identified, 90% of victims were women	Could be an alternative channel for disclosure and seek social support, receive valuable information, obtain emotional encouragement, inform the victims about IPV laws and how to pursue a lawsuit; most messages provided informational support as well as emotional support regarding wishes, encouragement, and empathy to the victims. A small proportion of messages were found to present blaming attribution
Fiorillo 2017, USA Peer-reviewed article	Acceptance and Commitment Therapy (ACT) intervention; 6 web-based multimedia sessions approximately 1 h each	Pre and post-test quantitative study to evaluate the acceptability, feasibility, and efficacy of the ACT intervention program for	n = 25 women; mean age = 39 (SD = 16), 36% identified primarily as students; 76% White; 80% heterosexual; all	Results showed significant statistical and clinical improvements in targeted outcomes (PTSD, depression, anxiety) upon

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Table 2. (continued)

ID	Intervention(s)	Study methods	Sample characteristics	Results
	including video narration, text components, exercises, and worksheets; included fictional case examples to clarify key concepts; included mindfulness and clarifying values	adult women experiencing distress related to a history of unwanted sexual and physical experiences. Assessments included the Stressful Life Events Screening Questionnaire, PTSD, depression, anxiety, psychological flexibility, ACT concepts	fluent in English; all attained at least a high school or equivalent; 40% yearly household income less than $10,000, 16% yearly household income of less than $25,000	completion of intervention; large pre- to post-treatment effects were found on measures of PTSD, depression, anxiety, and psychological flexibility; ACT concepts can be delivered and understood in a web-based format even without individual personalization. The attrition rate was relatively low (16%; n = 4), and participants reported good satisfaction with the intervention and gave high usability scores to the web-based system
Steinmetz 2017, USA Book chapter	Trauma-focused therapy was delivered for free; video-conferencing from screening and diagnosis to creating a tailored therapy plan; psychotherapy services by therapists with extensive training in trauma	Qualitative case study of a woman experiencing IPV and referred to the University of Wyoming Psychology Clinic for treatment of PTSD; assessment measures were administered every 4 appointments	n = 1 woman; age 35; mother of 2 young children; rural	Having therapists trained to deliver psychotherapies remotely increases the availability of these supports to women in rural areas. This use of video conferencing technology also offers a way for smaller women's organizations to

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Table 2. (continued)

ID	Intervention(s)	Study methods	Sample characteristics	Results
	intervention theory and techniques			offer services by acting as a liaison between a therapist and client without having to hire a full-time therapist on staff
Supporting women after leaving an abusive partner (n = 4)				
Gondolf 1998, USA Peer-reviewed article	Telephone counseling with program staff weekly using guiding questions: (1) current problems, conflicts, or abuse; (2) recent positive steps or actions to deal with them; (3) proposed steps or actions; and (4) additional issues, problems or questions. Each session was approximately 15–30 min	Mixed methods, comparison of telephone counseling with two shelter-based face-to-face services (support group, individual counseling) over 2 years. For all, collected a background questionnaire, reasons for accepting or rejecting services, and reasons for dropout. For phone intervention, recorded reported problems and proposed actions	n = 368 women, 157 (43%) accepted phone counseling services and 211 (57%) accepted face-to-face services; all women were involved in criminal and civil cases for domestic violence; 73% White; 50% had some college education	For phone intervention, 20% participated in one session, 7% participated in several sessions, and 73% indicated interest but did not participate in any sessions (primarily because they felt they did not need them). Phone counseling results: sessions focused primarily on the abuse; most said they were going to continue counseling or seek it in the future; well-being and mental health of the women's children was a major problem area
McDonald 2001, Australia	Marg's Place, an innovative emergency shelter model staff support for women	Qualitative formative and summative evaluation; interviews with staff and	10 interviews and 13 surveys with current and former female clients.	Average stay of 20 days; can cater to people with multiple and complex

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Table 2. (continued)

ID	Intervention(s)	Study methods	Sample characteristics	Results
Peer-reviewed article	and children in separate smaller residences versus in larger communal shelters; maximum period of 6 weeks; other supports can be provided for up to 4 months. Served 35 women and 42 children during the first 12 months of operation	management, interviews with current and former clients, user satisfaction survey, interviews with workers in other agencies, analysis of client databases and program documents	The clients' age range = 20–47; 60% Anglo Australian, others represented 11 other cultural identities (including 1 Torres Strait Islander and 21 Koori); all lived in rural settings. Also interviews with staff and other service providers	needs who would be unlikely to be accommodated successfully in a communal refuge; for the majority did not appear to increase feelings of isolation or loneliness; for most offered a good balance between privacy and support; provided greater scope for cultural and religious practices. Less opportunity for informal, constant support from other women and staff; The rural location afforded opportunities for creating a new identity but created challenges of maintaining existing networks
Ross 2022, Australia Peer-reviewed article	Online application for domestic violence protection orders through the and domestic violence web portal to make the processes leading up to the	Mixed methods, compared experiences of applicants who used either a conventional court process or an online application process trialed in three	28 people interviewed who used the service (43% did the online process, 57% standard process); 83% female; 1 identified as Aboriginal/ Torres	The online application was rated as simpler and easier to understand and less stressful; the online application process was more accessible and

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Table 2. (continued)

ID	Intervention(s)	Study methods	Sample characteristics	Results
	application hearing as user-friendly as possible; provide timely and useful evidence-based risk information; promote earlier risk identification	courts over 12 months; interviewed applicants using the online and conventional process; online survey, interviews and focus groups with staff; examined court data	Strait Islander. Also examined court data on 791 applications	enhanced agency; reduced the workload of court staff and resulted in faster case processing, with online applicants reaching the court hearing stage nearly 2 weeks earlier than paper-based applicants; not find that the online application process provided earlier or better risk identification
Tschirch 2006, USA Peer-reviewed article	Interactive video teleconferencing for distance patient care; initial nursing assessment and baseline laboratory work; initial interactive video teleconference consultation with the psychiatrist, and three to four follow-up visits	Mixed methods post intervention evaluation over 18 months; survey plus clinical interviews; current psychological symptom status; family nurse practitioner completed history, physical examination; Psychiatric nurse practitioner comprehensive assessment; Psychiatrist conducted teleconference clinic examination	n = 34 women, average age 33, all were women's shelter residents, who were referred for psychiatric evaluation and scored <70 on the Global Severity Index	110 telemedicine visits were conducted; patients seen an average of 3–4 times; 74% who initiated treatment were treated successfully and referred for continued mental health care; 20/27 women referred to and received care and 11 remained in treatment 1 year later; expansion of referral pathways to mental health services; increased availability of resources; no admissions to mental hospital; only one emergency room visit; reduced acute symptoms of anxiety and depressions

The characteristics of the interventions reported in the 20 individual studies varied greatly. In each of these studies, the researchers examined a unique intervention. Most involved some form of service delivery via technologies such as online apps, texts, social media, online discussion forums, and websites (e.g., Alvarez et al., 2018; Anderson et al., 2021b; Bacchus et al., 2016; Cameron, 2011; Chu et al., 2021; Doherty, 2017; Draucker et al., 2019; Fiorillo et al., 2017; Ford-Gilboe et al., 2017; Glass et al., 2017; Hatch et al., 2020; Khaki, 2016; Ross & Aitken, 2022). Other studies looked at individual psychotherapy and supports that were delivered via video-conferencing or by telephone (Burge et al., 2017; Chidanand, 2014; Gondolf, 1998; Steinmetz & Gray, 2017; Tschirch et al., 2006). One intervention in Tanzania utilized information and an educational program delivered by radio (Abeid et al., 2015). One intervention involved an innovative emergency shelter model relevant to the COVID-19 pandemic context as it involved supporting women and children in separate smaller residences versus larger more communal shelters (McDonald & Green, 2001).

Theoretical Categorization of Interventions

In Table 3, we included a summary of the interventions included in the systematic reviews and individual studies along with key examples of interventions representing each of the four categories we developed to organize the interventions. Approximately one-fifth of the interventions focused on *preventing IPV from occurring*. Many of these interventions were apps focusing on avoidance and education that were developed and implemented around the world (e.g., Eisenhut et al., 2020). Approximately one-quarter of the interventions focused on *identifying and documenting IPV* facilitated by various forms of technologies to understand and recognize IPV incidents, and to track and share information about IPV incidents. Just over one-half of the interventions focused on *supporting women while living with and/or leaving an abusive partner*. These interventions spanned the needs of women in reporting incidents, accessing professional resources, and safety planning. Very few (4%) interventions focused on *supporting women after leaving an abusive partner*.

Intervention Outcomes

In this section, we include results on the health and safety outcomes followed by results about the feasibility and acceptability of the interventions from the included studies.

Health and Safety Outcomes

The authors of three of the systematic reviews reported results related to health and safety outcomes for women. In the Anderson and colleagues review (2021a), several studies found no significant differences between groups while others showed significantly less decisional conflict and uncertainty, improved mental health, reduced IPV exposure, and significantly less male-perpetrated aggression after one year. The lack

Table 3. Examples of Systematic Reviews and Individual Study Interventions (n = 238) by Category.

Category and description	Examples and country (if known)
Preventing IPV: 50/238, 21% 48/218 systematic review interventions, 2/20 individual study interventions	
Interventions designed to prevent or avoid IVP from occurring for women and girls, IPV education apps, legal protections and awareness of legal protections, and awareness raising programs	• Web-based, self-paced tutorial to prevent campus sexual assault (Anderson et al., 2021a) • LegalFling app (2018) (Netherlands) requests and verifies explicit consent before having sex, verifies mutual consent (Eisenhut et al., 2020) • PinkTaxi (Pakistan) provides women with safe rides driven by women only (Eisenhut et al., 2020) • Streetpal app (Egypt) to create awareness for women to reach out for help, learn about laws against sexual harassment (Eisenhut et al., 2020) • 160 Girls Project (Kenya) provides legal protection from rape for girls, awareness raising about girls rights and police obligations (Eisenhut et al., 2020) • An awareness creation program utilizing radio programs for information and education in Tanzania (Abeid et al., 2015) • Domestic Violence Enhanced Home Visitation Program (DOVE) app version, empowerment intervention to prevent IPV during pregnancy (USA) (Bacchus et al., 2016)
Identifying and documenting abuse: 56/238, 23% 48/218 systematic review interventions, 8/20 individual study interventions	
Interventions to provide information to help women understand and recognize IPV; enhance awareness of IPV behaviors and support women's safety using online safety planning tools prior to abuse occurring; apps to promoting public awareness and exchange of IPV experiences	• Anna Bella app (Spain) helps to transform the way society views women who have experienced abuse (Eisenhut et al., 2020) • Harasstracker app (Lebanon) map and document sexual harassment (Eisenhut et al., 2020) • Computer-based assessment in waiting room, a positive IPV screen

(continued)

Table 3. (continued)

Category and description	Examples and country (if known)
	alerts a physician (Canada) (Ahmad et al., 2009) (Anderson et al., 2021a) • Computer-based, self-paced IPV screening and intervention module (Anderson et al., 2021a) • Proprietary app to identify abusive texts using machine learning (Anderson et al., 2021a) • Self-assessment safety planning tool (Canada) that can be highly tailored to a local and rural context and/or marginalized populations living in urban areas (Doherty, 2017) • iCan (Canada) an interactive tailored online safety and health intervention tailored to provide feedback on levels of risk, personalized detailed action plan (Ford-Gilboe et al., 2017) • Identification and Referral to Improve Safety (IRIS) (USA) internet-based safety decision aid to inform women about danger in their relationships, assess safety options (Khaki, 2016) • Writing to Improve Self-in-Relationships (WISER) (USA) online narrative therapy program to identify and challenge problematic relational schema and explore more satisfying relationships (Draucker et al., 2019)
Supporting women while living with and/or leaving an abusive partner: 123/238 52% 117/218 systematic interventions, 6/20 individual study interventions	
Interventions involving alerts sent to designated contacts during an abusive incident that may include GPS tracking and recording of the incident (e.g., video, voice), apps and services to connect with professional resources (e.g., legal, psychological, healthcare) after an	• Bsafe app (Norway) includes voice activation, live streaming and automatic recording (Eisenhut et al., 2020) • 24 × 7 Women Safety App (India) notifies emergency contacts,

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Table 3. (continued)

Category and description	Examples and country (if known)
incident, provide services using various technologies (e.g., email, teleconference delivery of cognitive behavioral therapy) or video-mediated triage into appropriate services, Interventions involved safety planning for future incidents	records voice and takes photographs and transfers information to police (Eisenhut et al., 2020) • iCanPlan4Safety (Canada) online support tool for women experiencing IPV, helps women think about their situation, weigh the risk, and learn about options (Rempel et al., 2019) • Videoconferencing/telehealth technology to provide evidence-based treatment to reach rural IPV survivors (USA) (Rempel et al., 2019) • Web-based danger assessment and safety planning interventions culturally adapted for women who are immigrants, refugees, or indigenous (USA) (Anderson et al., 2021a) • Motivational interviewing followed by telephone follow-up sessions (USA) (Goldstein et al., 2017) • Daily phone survey and weekly phone check ins with a professional after experiencing IPV (USA) (Burge et al., 2017) • Focusing-Oriented Arts Therapy adapted to an internet format (FOAT-IP) (USA) to promote emotional and spiritual healing in South Asian women living in the USA (Chidanand, 2014) • Baidu Tieba's IPV Group (Hong Kong) social network site for IPV survivors to share their experiences and to seek suggestions from community members (Chu et al., 2021)
Supporting women after leaving an abusive partner: 9/238, 4% 5/218 systematic review interventions, 4/20 individual study interventions	
Technology-mediated support groups and individual psychotherapy; technology-mediated access to the legal and justice system; supports and resources to gain financial security; access to healthcare personal safety; establish future plans; alternate models of emergency shelters	• E-mail mediated interaction for survivors of abuse after receiving a protection for abuse court order (USA) (Rempel et al., 2019) • Online application for domestic violence protection orders to provide

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Table 3. (continued)

Category and description	Examples and country (if known)
	more timely services and promote earlier risk identification (Australia) (Ross & Aitken, 2022) • LEAF a privacy-conscious social network-based intervention tool for IPV survivors (USA) (Rempel et al., 2019) • Online therapist-facilitated program for survivors of rape-related PTSD (USA) (Anderson et al., 2021a) • Marg's Place, an innovative emergency shelter model staff support for women and children in separate smaller residences (Australia) (McDonald & Green, 2001)

of standardization of measurement tools across studies was a challenge in understanding experiences of IPV.

In the scoping review conducted by Rempel and colleagues (2019), some individual outcomes of the studies were reported including decreased anxiety, depression, and anger and increased personal and social support. Goldstein and colleagues (2017) did not report the outcomes of the interventions, but they reported that all outcomes focused on patient-level variables such as mental health and safety-promoting behaviors. One individual study in the Goldstein review (Tiwari et al., 2010) included an intervention involving a 30-min empowerment session and telephone calls once a week for 12 weeks and 24-h access to a hotline that resulted in significantly reduced depression and psychological aggression, improvement in perceived social support and the use of safety-promoting behaviors.

All of the 20 individual studies indicated some positive outcomes of the interventions for the health and safety needs of women although the findings in quantitative studies did not always reach statistical significance. Several researchers attributed positive outcomes to providing highly tailored interventions, such as providing feedback based on the women's individual responses to questions (e.g., Doherty, 2017; Ford-Gilboe et al., 2017).

In Table 4, we include a summary of the health and safety outcomes measured in the five individual experimental studies in our review organized by type of outcome. Few outcome measures were used consistently across studies, other than the utilization of the Centre for Epidemiologic Studies Depression Scale across three studies (Ford-Gilboe et al., 2020; Glass et al., 2017; Hatch et al., 2020). There were only a few statistically significant differences reported between the intervention and control groups. A 6-week internet-based safety decision aid intervention offering tailored feedback and safety plans resulted in the intervention group being statistically more likely to have reduced decisional conflict, improved usage of IPV strategies, and greater likelihood to end the abusive relationship (Glass et al., 2017). Abeid and colleagues (2015) found that their awareness program utilizing radio programs in Tanzania resulted in a statistically significant improvement in correct knowledge about violence and abuse.

In some studies, the researchers reflected on why expected and/or significant results were not found, such as needing a greater focus on intervention fidelity to ensure that the interventions were delivered consistently across participants (e.g., Hatch et al., 2020). Additional issues identified that may have affected expected intervention outcomes included participant literacy level (Alvarez et al., 2018; Anderson et al., 2021b), small sample size (Chidanand, 2014; Khaki, 2016), study samples lacking diversity, such as ethnic or racial diversity (Anderson et al., 2021b; Khaki, 2016), and access to technology (Bacchus et al., 2016).

Intervention Feasibility and Acceptability

Minimal evidence related to feasibility and acceptability was included in the four systematic reviews. In the Anderson and colleagues (2021a) review, attrition from studies that reported noncompliance (n = 19 studies) ranged from 4% to 36% (median = 15%) with computer-mediated interventions showing the highest rate of dropout. A small

Table 4. Health and Safety Outcomes: Experimental Studies.

Outcome	Abeid 2015 Int. Control p n = 807 n = 744	Ford-Gilboe 2020 Int. Control p n = 231 n = 231	Glass 2017 Int. Control p n = 418 n = 423	Hatch 2020 Int. Control p n = 231 n = 230	Khaki 2016 Int. Control p n = 78 n = 76
Incidence and Severity of IPV					
Revised Conflict Tactics Scale (CTS2)—Minor Physical Assault Subscale				no sig. diff. reported	
Severity of Violence Against Women Scale (SVAWS)					
Physical subscale			33.83[a] 31.65[a] 0.069		
Psychological subscale			37.85[a] 35.43[a] 0.333		
Sexual subscales			8.98[a] 8.73[a] 0.059		
Experiences of coercive control		39.62[a] 40.94[a] 0.645			
Women's Experiences of Battering			38.98[a] 39.33[a] 0.813		
Mental Health, Impact on Relationships					
Center for Epidemiologic Studies Depression Scale (CESD)		27.95[a] 29.83[a] 0.598	26.82[a] 26.73[a] 0.403	no sig. diff. reported	
PTSD checklist, Civilian Version (PCL-C), 17 items		43.29[a] 44.45[a] 0.269			
PTSD Checklist, Civilian Version (PCL-C, 6 items			15.83[a] 16.06[a] 0.750		
Decisional Conflict Scale—low literacy version			7.97[a] 8.93[a] 0.042		
Uncertainty subscale		−0.08[b] 0.316			
Feeling uninformed subscale		−0.21[b] 0.057			
Lack of value clarity subscale		−0.10[b] 0.423			
Lack of support subscale		0.01[b] 0.938			

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Table 4. (continued)

Outcome	Abeid 2015 Int. Control p n = 807 n = 744	Ford-Gilboe 2020 Int. Control p n = 231 n = 231	Glass 2017 Int. Control p n = 418 n = 423	Hatch 2020 Int. Control p n = 231 n = 230	Khaki 2016 Int. Control p n = 78 n = 76
Global Measure of Sexual Satisfaction				no sig. diff. reported	
Behavioral Self-Regulation for Effective Relationships				no sig. diff. reported	
Couples Satisfaction Index				no sig. diff. reported	
Communication Patterns Questionnaire				no sig. diff. reported	
Safety					
Intimate Partner Violence Strategies Index			↑12% ↑9% 0.037		
Self-efficacy for Safety Planning		79.55[a] 76.77[a] 0.927			
Helpfulness of safety strategies		3.55[c] 3.54[c] 0.420			
Useful safety seeking behaviors					60% 52% 0.08
Danger Assessment Survey					13.57[a] 12.29[a] 0.55
Other					
Ended the abusive relationship			63% 53% 0.008		
Sought out healthcare after being raped	↑ 35 cases ↓5 cases not reported				
Correct knowledge about violence and abuse	80.55% 71.91% 0.03				

Note. Data refers to outcomes at last data assessment point for the intervention and control groups.
[a]Refers to the mean.
[b]Refers to the effect size.
[c]Refers to mean helpfulness scores on 5 point scale ranging from not at all helpful (1) to very helpful (5).

number of non-experimental studies did report strong interest in mHealth for IPV prevention (Anderson et al., 2021a). In several studies included in Rempel and colleagues (2019), participants reported positive results related to feasibility and acceptability. Eisenhut and colleagues (2020) reported that 77% of the apps originated in the private sector and 76% of the apps were available free of charge.

In the 20 individual studies, various aspects of feasibility and acceptability of the interventions were reported including intervention completion rates, value and satisfaction, and increased access to interventions. There were quite high levels of intervention completion rates across the experimental studies. Studies utilizing other designs also showed low attrition rates, such as 84% of participants completing all four web-based multimedia sessions (Fiorillo et al., 2017) and 74% of participants completing all aspects of a videoconference program involving assessment and three to four psychiatrist consultations (Tschirch et al., 2006). Conversely, few participants in a telephone counseling intervention participated in more than one offered session (Gondolf, 1998).

The value and satisfaction with the interventions were assessed in several ways. General results of usefulness and applicability were found across several studies (Anderson et al., 2021b; Chidanand, 2014; Chu et al., 2021). Several studies reported improved awareness of services and knowledge about IPV (Abeid et al., 2015; Alvarez et al., 2018; Bacchus et al., 2016; Cameron, 2011). The System Usability Scale was utilized to determine that a web-based multimedia intervention fell within the "good" range (Fiorillo et al., 2017). Participant satisfaction was assessed in a few studies, such as Fiorillo and colleagues (2017) who found a high level of satisfaction measured with the Client Satisfaction Questionnaire (CSQ). Hatch and colleagues (2020) assessed satisfaction with, and perceived utility of, a text-based relationship intervention. The participants read more than 70% of the messages they received. While they felt the messages encouraged them to be more mindful, provided good insight, and were helpful, they were less likely to agree that the content helped them make positive changes in their relationships or that they would recommend the intervention to their friends.

Some interventions provided increased access to interventions for women with specific characteristics, such as women living in rural or remote places (Abeid et al., 2015; Bacchus et al., 2016; Doherty, 2017; McDonald & Green, 2001; Ross & Aitken, 2022; Steinmetz & Gray, 2017). In some cases, the interventions specifically provided enhanced privacy and anonymity (e.g., Alvarez et al., 2018; Bacchus et al., 2016). Several sources were inclusive of women of various ethnic and racial backgrounds and nationalities, but only a few studies specifically compared results from different groups, such as African Americans and non-Hispanic White Americans (Khaki, 2016) or focused on a specific group, such as South Asian women living in the United States (Chidanand, 2014). One challenge identified was a high level of literacy needed to participate in the intervention (Anderson et al., 2021b).

Discussion

In this review, we synthesized evidence from four systematic reviews and 20 individual studies that primarily utilized various forms of technology that could be implemented in

the COVID-19 pandemic context. Many of these interventions can also provide greater access to services for women who have little access to in-person services, women living in rural and remote places, and for women who do not wish to utilize in-person interventions. Due to the implementation of our search strategy in May 2020, it is not surprising that we did not identify reports of research studies evaluating the impact of interventions since the onset of COVID-19. However, the interventions are relevant to the COVID-19 pandemic context due to the characteristics of the interventions.

In a separate component of our research, we conducted a search of media reports of IPV interventions developed or adapted since the onset of the COVID-19 pandemic to June 2020 (Weeks et al., 2020). Most interventions we identified were reports of technology-mediated services, including various apps. Importantly we identified interventions that supported women experiencing many forms of IPV beyond physical abuse, such as initiatives to support information technology security skills. We recognize that additional interventions have been developed or adapted since June 2020, especially those related to new forms of technologies, and evaluations of these interventions are needed.

The categories we developed were useful in organizing IPV interventions. Many interventions fit into the category of supporting women while living with and/or leaving an abusive partner. While the theory of reclaiming self (Merritt-Gray & Wuest, 1995; Wuest & Merritt-Gray, 1999, 2001) divides this category into counteracting abuse and breaking free, this period can be a long process for many women, and evidence reveals that many women return to an abusive partner several times before breaking free (Anderson, 2003). Also, many interventions were relevant to both counteracting abuse and breaking free. While many interventions focused on supports for women who already experienced IPV, it is relevant that some interventions focused on preventing IPV and the early recognition and awareness of IPV. Very few interventions relevant to the COVID-19 pandemic context focused on supporting women after leaving an abusive partner. This may be because these interventions, such as emergency shelters and individual and group counseling, have been historically provided primarily in-person. It is clear that there is a need for more development of interventions appropriate to the COVID-19 context to support women after leaving an abusive partner, including supports for women who wish to remain living in their homes and communities.

Greater utilization of consistent outcome measures of quantitative studies would contribute greatly to our knowledge. There is also a need for replication research as few studies focused on examining the outcome of the same intervention. These actions could lead to improved evidence to support decision-making and the ability to conduct systematic reviews utilizing meta-synthesis.

The results of this review highlight that many initiatives relevant to the COVID-19 context are dependent upon various forms of technology. There are many implications of this finding for policy and practice including the need for access to technology. Women who do not have the financial resources to pay for smartphones or computers or reside in places where there is no reliable internet connection (e.g., rural and remote places) may be particularly vulnerable during the COVID-19 pandemic, and access to technology is crucial, especially for women living in low resource countries and women living in poverty in other countries (Yeager et al., 2015). Initiatives are

needed to ensure the stability of communication networks, especially in rural or remote areas and in low-income countries. Interventions may also be needed to support women to learn to use technology who have low technology literacy.

While IPV researchers tend to focus much more on the needs of younger women versus older women there is a small body of knowledge that emphasizes the vulnerability and needs of older women (Stöckl & Penhale, 2015; Weeks et al., 2021). The sources included in our review clearly focused on women in midlife and younger. While we did not limit our search strategy to exclude older women, we found that these women were either overtly excluded from participating in studies or recruitment strategies did not result in their inclusion (e.g., Ford-Gilboe et al., 2020; Glass et al., 2017). It is clear that researchers need to expand their recruitment strategies to include older women, especially in studies examining the feasibility and usability of various technology-mediated interventions. Evidence indicates that many older adults who do not have cognitive decline can adapt to utilizing various technologies (Kim et al., 2017).

The included studies focused largely on research conducted in high resource countries with relatively well-educated and white samples; this may be due, in part, to our inclusion of studies only published in English or French. Some evidence of intersectionality in our synthesis was evident, such as a study focused on Spanish-dominant low-income Latinas (Alvarez et al., 2018), although a greater emphasis on intersectionality in study recruitment is needed. As most interventions were provided in one language only, efforts are needed to expand the availability of interventions in multiple languages. The synthesis of available evidence in languages other than English or French and with more diverse samples is warranted. It is important to ensure that interventions are tailored to meet the unique needs of diverse populations of women, such as those who live within social contexts where there are large economic inequities between men and women, where women have little mobility and autonomy, and where access to interventions is very limited (World Health Organization, 2005). IPV support services are very limited in low- and middle-income countries. In a recent review, Wood and colleagues (2021) identified that in these contexts, engaging informal networks of family members and friends was commonly utilized as a safety strategy in addition to strategies such as engaging in behavior change and building personal financial resources.

Conclusions

In this review, we contributed important and timely knowledge about IPV interventions for women that are relevant to the context of the COVID-19 pandemic. Importantly, these interventions can also benefit women who live in rural and remote places and women who do not wish to utilize in-person services, such as those who have concerns related to confidentiality. We found that the largest number of interventions focused on the identification of IPV and supporting women while living with and/or leaving an abusive partner. Additional interventions are needed that focus on the prevention of IPV from occurring, and interventions supporting women after leaving an abusive partner. Evidence across studies indicates many positive impacts of the initiatives on the physical health, mental health, and safety

needs of women. However, greater consistency in data collection methods is needed. Additional work is also needed to determine the feasibility and acceptability of these interventions, especially interventions developed or adapted since the onset of the COVID-19 pandemic.

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References

Abeid, M., Muganyizi, P., Mpembeni, R., Darj, E., & Axemo, P. (2015). A community-based intervention for improving health-seeking behavior among sexual violence survivors: A controlled before and after design study in rural Tanzania. *Global Health Action*, *8*, Article 28608. https://doi.org/10.3402/gha.v8.28608

Ahmad, F., Hogg-Johnson, S., Stewart, D. E., Skinner, H. A., Glazier, R. H., & Levinson, W. (2009). Computer-assisted screening for intimate partner violence and control: A randomized trial. *Annals of Internal Medicine*, *151*(2), 93–102. https://doi.org/10.7326/0003-4819-151-2-200907210-00124

Alvarez, C., Debnam, K., Clough, A., Alexander, K., & Glass, N. E. (2018). Responding to intimate partner violence: Healthcare providers' current practices and views on integrating a safety decision aid into primary care settings. *Research in Nursing & Health*, *41*(2), 145–155. https://doi.org/10.1002/nur.21853

Anderson, D. J. (2003). The impact on subsequent violence of returning to an abusive partner. *Journal of Comparative Family Studies*, *34*(1), 93–112. https://doi.org/10.3138/jcfs.34.1.93

Anderson, E. J., Krause, K. C., Meyer Krause, C. M., Welter, A., McClelland, D. J., Garcia, D. O., Ernst, K., Lopez, E. C., & Koss, M. P. (2021a). Web-based and mHealth interventions for intimate partner violence victimization prevention: A systematic review. *Trauma, Violence, & Abuse*, *22*(4), 870–884. https://doi.org/10.1177/1524838019888889

Anderson, J. C., Pollitt, E., Crowley, J., Holbrook, D., & Moret, J. E. D. (2021b). A mixed-methods evaluation of college student and provider perspectives on a smartphone application for help-seeking after violence. *Journal of American College Health*, *69*(6), 668–674. https://doi.org/10.1080/07448481.2019.1705839

Aromataris, E., Fernandez, R., Godfrey, C., Holly, C., Khalil, H., & Tungpunkom, P. (2020). Umbrella reviews. In E. Aromataris & Z. Munn (Eds.), *JBI manual for evidence synthesis*. Joanna Briggs Institute. https://synthesismanual.jbi.global

Aromataris, E., & Munn, Z. (2020). *JBI manual for evidence synthesis*. Joanna Briggs Institute, Adelaide, Australia. https://jbi-global-wiki.refined.site/space/MANUAL, https://doi.org/10.46658/JBIMES-20-01

Bacchus, L. J., Bullock, L., Sharps, P., Burnett, C., Schminkey, D. L., Buller, A. M., & Campbell, J. (2016). Infusing technology into perinatal home visitation in the United States for women experiencing intimate partner violence: Exploring the interpretive flexibility of an mHealth intervention. *Journal of Medical Internet Research*, *18*(11), Article e302. https://doi.org/10.2196/jmir.6251

Bogart, N. (2020, May 3). Advocates scramble to help domestic violence abuse victims as calls skyrocket during COVID-19. *CTV*. https://www.ctvnews.ca/health/coronavirus/advocates-scramble-to-help-domestic-abuse-victims-as-calls-skyrocket-during-covid-19-1.4923109

Bonomi, A. E., Thompson, R. S., Anderson, M., Reid, R. J., Carrell, D., Dimer, J. A., & Rivara, F. P. (2006). Intimate partner violence and women's physical, mental, and social functioning. *American Journal of Preventive Medicine*, *30*(6), 458–466. https://doi.org/10.1016/j.amepre.2006.01.015

Burge, S. K., Ferrer, R. L., Foster, E. L., Becho, J., Talamantes, M., Wood, R. C., & Katerndahl, D. A. (2017). Research or intervention or both? Women's changes after participation in a longitudinal study about intimate partner violence. *Families, Systems, & Health*, *35*(1), 25–35. https://doi.org/10.1037/fsh0000246

Cameron, R. W. (2011). The enactment of online social support by survivors of intimate partner violence (Publication No. 0419-4209) [Doctoral dissertation]. Waldon University. ProQuest Dissertations and Theses Global.

Chidanand, R. (2014). A quantitative study exploring the effects of Focusing-Oriented Arts Therapy—Internet protocol (FOAT-IP) on stress, anxiety, depression, and positive states of mind in South Asian women (Publication No. 3636779) [Doctoral dissertation]. Sofia University. ProQuest Dissertations and Theses Global.

Chu, T. H., Su, Y., Kong, H., Shi, J., & Wang, X. (2021). Online social support for intimate partner violence victims in China: Quantitative and automatic content analysis. *Violence Against Women*, *27*(3-4), 339–358. https://doi.org/10.1177/1077801220911452

Conroy, S., Burczycka, M., & Savage, L. (2019). *Family violence in Canada: A statistical profile, 2018* (Catalogue No. 85-002-X; p. 62). Statistics Canada. https://www150.statcan.gc.ca/n1/en/pub/85-002-x/2019001/article/00018-eng.pdf?st=DAg6Pn7f

Doherty, D. (2017). Rethinking safety planning: A self-directed tool for rural women who are abused. In T. Augusta-Scott, K. Scott, & L. M. Tutty (Eds.), *Innovations in interventions to address intimate partner violence: Research and practice* (pp. 18–32). Routledge/Taylor & Francis Group.

Draucker, C. B., Martsolf, D. S., Crane, S., McCord, A. L., Romero, L., & Al-Khattab, H. A. (2019). A feasibility test of an online intervention to prevention dating violence in emerging adults. *Archives of Psychiatric Nursing*, *33*(1), 37–45. https://doi.org/10.1016/j.apnu.2018.09.002

Eisenhut, K., Sauerborn, E., Garcia-Moreno, C., & Wild, V. (2020). Mobile applications addressing violence against women: A systematic review. *BMJ Global Health*, *5*(4), Article e001954. https://doi.org/10.1136/bmjgh-2019-001954

El Morr, C., & Layal, M. (2019). ICT-based interventions for women experiencing intimate partner violence: Research needs in usability and mental health. *Studies in Health Technology & Informatics*, *257*, 103–109. https://doi.org/10.3233/978-1-61499-951-5-103

Enright, M. (2020, May 1). Calls are down to women's shelters during the pandemic, but it's not good news. The Sunday Edition, *CBC Radio*. https://www.cbc.ca/radio/sunday/the-sunday-edition-for-may-3-2020-1.5547652/calls-are-down-to-women-s-shelters-during-the-pandemic-but-it-s-not-good-news-1.5547818

Fiorillo, D., McLean, C., Pistorello, J., Hayes, S. C., & Follette, V. M. (2017). Evaluation of a web-based acceptance and commitment therapy program for women with trauma-related problems: A pilot study. *Journal of Contextual Behavioral Science*, *6*(1), 104–113. https://doi.org/10.1016/j.jcbs.2016.11.003

Ford-Gilboe, M., Varcoe, C., Scott-Storey, K., Perrin, N., Wuest, J., Wathen, C. N., Case, J., & Glass, N. (2020). Longitudinal impacts of an online safety and health intervention for women experiencing intimate partner violence: Randomized controlled trial. *BMC Public Health*, *20*(1), 260. https://doi.org/10.1186/s12889-020-8152-8

Ford-Gilboe, M., Varcoe, C., Scott-Storey, K., Wuest, J., Case, J., Currie, L., Glass, N., Hodgins, M., Macmillan, H., Perrin, N., & Wathen, C. (2017). A tailored online safety and health intervention for women experiencing intimate partner violence: The iCAN plan 4 safety randomized controlled trial protocol. *BMC Public Health*, *17*(1), 273. https://doi.org/10.1186/s12889-017-4143-9

Glass, N. E., Perrin, N. A., Hanson, G. C., Bloom, T. L., Messing, J. T., Clough, A. S., Campbell, J. C., Gielen, A. C., Case, J., & Eden, K. B. (2017). The longitudinal impact of an internet safety decision aid for abused women. *American Journal of Preventive Medicine*, *52*(5), 606–615. https://doi.org/10.1016/j.amepre.2016.12.014

Goldstein, K. M., Gierisch, J. M., Zullig, L. L., Alishahi, A., Brearly, T., Dedert, E. A., Raitz, G., Sata, S. S., Whited, J. D., Bosworth, H. B., McDuffie, J., & Williams, J. W.Jr. (2017). Telehealth services designed for women: An evidence map (#09-010). Department of Veterans Affairs, United States. https://www.ncbi.nlm.nih.gov/books/NBK532568/

Gondolf, E. W. (1998). Service contact and delivery of a shelter outreach project. *Journal of Family Violence*, *13*(2), 131–145. https://doi.org/10.1023/A:1022889506479

Hassija, C., & Gray, M. J. (2011). The effectiveness and feasibility of videoconferencing technology to provide evidence-based treatment to rural domestic violence and sexual assault populations. *Telemedicine and E-Health*, *17*(4), 309–315. https://doi.org/10.1089/tmj.2010.0147

Hatch, S. G., Roddy, M. K., Doss, B. D., Rogge, R. D., Esplin, C. R., & Braithwaite, S. R. (2020). Texts 4 romantic relationships – A randomized controlled trial. *Journal of Couple & Relationship Therapy*, *19*(2), 115–135. https://doi.org/10.1080/15332691.2019.1667936

Hughes, J. (2010). Putting the pieces together: How public health nurses in rural and remote Canadian communities respond to intimate partner violence. *Online Journal of Rural Nursing and Health Care*, *10*(1), 34–47. https://doi.org/10.14574/ojrnhc.v10i1.72

Issel, L. M. (2014). *Health program planning and evaluation: A practical and systematic approach for community health* (3rd ed.). Jones and Bartlett Learning.

Khaki, L. (2016). Comparing the effectiveness of an interactive internet-based safety-seeking decision aid for African American and white women in abusive relationships (Publication No. 10241710) [Doctoral dissertation]. Morgan State University. ProQuest Dissertations and Theses Global.

Kim, K., Gollamudi, S. S., & Steinhubl, S. (2017). Digital technology to enable aging in place. *Experimental Gerontology*, *88*, 25–31. https://doi.org/10.1016/j.exger.2016.11.013

McDonald, J., & Green, R. (2001). A dispersed refuge model for women escaping domestic violence: A regional case study. *Australian Journal of Primary Health*, *7*(1), 85–89. https://doi.org/10.1071/PY01014

Merritt-Gray, M., & Wuest, J. (1995). Counteracting abuse and breaking free: The process of leaving revealed through women's voices. *Health Care for Women International*, *16*(5), 399–412. https://doi.org/10.1080/07399339509516194

Mojahed, A., Brym, S., Hense, H., Grafe, B., Helfferich, C., Lindert, J., & Garthus-Niegel, S. (2021). Rapid review on the associations of social and geographical isolation and intimate partner violence: Implications for the ongoing COVID-19 pandemic. *Frontiers in Psychiatry*, *12*, 578150. https://doi.org/10.3389/fpsyt.2021.578150

Murray, C. E., Pow, A. M., Chow, A., Nemati, H., & White, J. (2015). Domestic violence service providers' needs and perceptions of technology: A qualitative study. *Journal of Technology in Human Services*, *33*(2), 133–155. https://doi.org/10.1080/15228835.2014.1000558

Neill, K. S., & Hammatt, J. (2015). Beyond urban places: Responding to intimate partner violence in rural and remote areas. *Journal of Forensic Nursing*, *11*(2), 93–100. https://doi.org/10.1097/JFN.0000000000000070

Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., & McDonald, S., … D. Moher (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *BMJ*, *372*, n71. https://doi.org/10.1136/bmj.n71

Pandor, A., Kaltenthaler, E., Martyn-St James, M., Wong, R., Cooper, K., Dimairo, M., O'Cathain, A., Campbell, F., & Booth, A. (2019). Delphi consensus reached to produce a decision tool for Selecting Approaches for Rapid Reviews (STARR). *Journal of Clinical Epidemiology*, *114*, 22–29. https://doi.org/10.1016/j.jclinepi.2019.06.005

Peters, M., Godfrey, C., McInerney, P., Munn, Z., Tricco, A., & Khalil, H. (2020). Chapter 11: Scoping reviews. In E. Aromataris & Z. Munn (Eds.), *JBI manual for evidence synthesis*, JBI. https://doi.org/10.46658/JBIMES-20-12

Piquero, A. R., Jennings, W. G., Jemison, E., Kaukinen, C., & Knaul, F. M. (2021). Domestic violence during the COVID-19 pandemic – Evidence from a systematic review and meta-analysis. *Journal of Criminal Justice*, *74*, 101806. https://doi.org/10.1016/j.jcrimjus.2021.101806

Rempel, E., Donelle, L., Hall, J., & Rodger, S. (2019). Intimate partner violence: A review of online interventions. *Informatics for Health and Social Care*, *44*(2), 204–219. https://doi.org/10.1080/17538157.2018.1433675

Rennison, C., & Rand, M. (2003). Nonlethal intimate partner violence against women: A comparison of three age cohorts. *Violence Against Women*, *9*(12), 1417–1428. https://doi.org/10.1177/1077801203259232

Ross, S., & Aitken, S. (2022). "If it hadn't been online I don't think I would have applied": Applicant experiences of an online family violence intervention order process. *Journal of Interpersonal Violence*, *37*(1-2), 221–238. https://doi.org/10.1177/0886260520907367

Sediri, S., Zgueb, Y., Ouanes, S., Ouali, U., Bourgou, S., Jomli, R., & Nacef, F. (2020). Women's mental health: Acute impact of COVID-19 pandemic on domestic violence. *Archives of Women's Mental Health*, *23*(6), 749–756. https://doi.org/10.1007/s00737-020-01082-4

Shepherd, J. (2001). Where do you go when it's 40 below? Domestic violence among rural Alaska native women. *Affilia*, *16*(4), 488–510. https://doi.org/10.1177/08861090122094389

Steele, S. M., Everett, B. G., & Hughes, T. (2020). Influence of perceived femininity, masculinity, race/ethnicity and socioeconomic status on intimate partner violence among sexual-minority

women. *Journal of Interpersonal Violence*, *35*(1-2), 453–475. https://doi.org/10.1177/0886260516683176

Steinert, J., Alacevich, C., Steele, B., Hennegan, J., & Yakubovich, A. (2021). Response strategies for promoting gender equality in public health emergencies: A rapid scoping review. *BMJ Open*, *11*(8), e048292. https://doi.org/10.1136/bmjopen-2020-048292

Steinmetz, S., & Gray, M. J. (2017). Treating emotional consequences of sexual assault and domestic violence via telehealth. In M. M. Maheu, K. P. Drude, & S. D. Wright (Eds.), *Career paths in telemental health* (pp. 139–149). Springer International Publishing.

Stöckl, H., & Penhale, B. (2015). Intimate partner violence and its association with physical and mental health symptoms among older women in Germany. *Journal of Interpersonal Violence*, *30*(17), 3089–3111. https://doi.org/10.1177/0886260514554427

Strand, S. J. M., & Storey, J. E. (2019). Intimate partner violence in urban, rural, and remote areas: An investigation of offense severity and risk factors. *Violence Against Women*, *25*(2), 188–207. http://doi.org/10.1177/1077801218766611.

Tiwari, A., Fong, D. Y. T., Yuen, K. H., Yuk, H., Pang, P., Humphreys, J., & Bullock, L. (2010). Effect of an advocacy intervention on mental health in Chinese women survivors of intimate partner violence: A randomized controlled trial. *Journal of the American Medical Association*, *304*(5), 536–543. https://doi.org/10.1001/jama.2010.1052

Tricco, A.C, Langlois, E., & Straus, S. (2017). Rapid reviews to strengthen health policy and systems: A practical guide. World Health Organization. https://www.who.int/alliance-hpsr/resources/publications/rapid-review-guide/en/

Tschirch, P., Walker, G., & Calvacca, L. T. (2006). Nursing in tele-mental health. *Journal of Psychosocial Nursing and Mental Health Services*, *44*(5), 20–27. https://doi.org/10.3928/02793695-20060501-05q

Ulloa, E. C., & Hammett, J. F. (2016). The effect of gender and perpetrator–victim role on mental health outcomes and risk behaviors associated with intimate partner violence. *Journal of Interpersonal Violence*, *31*(7), 1184–1207. https://doi.org/10.1177/0886260514564163

Weeks, L., Stilwell, C., Rothfus, M., Neeb, D., Jackson, L., Carson, A., Moody, E., Weeks, A., MacQuarrie, M., Helpard, H., Dupuis-Blanchard, S., & LeBlanc, K. (2020, September). What initiatives have been created to meet the needs of women experiencing domestic violence during COVID-19? http://hdl.handle.net/10222/80037

Weeks, L. E., Stilwell, C., Gagnon, D., Dupuis-Blanchard, S., MacQuarrie, C., & Jackson, L. (2021). Initiatives to support older women who experience intimate partner violence. *Violence Against Women*, *27*(15-16), 3011–3029. https://doi.org/org/10.1177/1077801220988355

Weiss, N. S., & Koepsell, T. D. (2014). *Epidemiologic methods: Studying the occurrence of illness*. Oxford University Press.

Westbrook, L. (2007). Digital information support for domestic violence victims. *Journal of the American Society for Information Science and Technology*, *58*(3), 420–432. https://doi.org/10.1002/asi.20520

Wild, K. J., Gomes, L., Fernandes, A., de Araujo, G., Madeira, I., da Conceicao Matos, L., McDonald, S., & Taft, A. (2019). Responding to violence against women: A qualitative study with midwives in Timor-Leste. *Women and Birth*, *32*(4), e459–e466. https://doi.org/10.1016/j.wombi.2018.10.008

Wood, S. N., Glass, N., & Decker, M. R. (2021). An integrative review of safety strategies for women experiencing intimate partner violence in low-and middle-income countries. *Trauma, Violence, & Abuse*, *22*(1), 68–82. https://doi.org/10.1177/1524838018823270

World Health Organization. (2005). WHO multi-country study on women's health and domestic violence against women: Summary report of initial results on prevalence, health outcomes and

women's responses. https://apps.who.int/iris/bitstream/handle/10665/43310/9241593512_eng.pdf?sequence=1
World Health Organization. (2020). COVID-19 and violence against women: What the health sector/system can do. https://www.who.int/reproductivehealth/publications/vaw-covid-19/en/
Wuest, J., & Merritt-Gray, M. (1999). Not going back: Sustaining the separation in the process of leaving abusive relationships. *Violence Against Women*, *5*(2), 110–133. https://doi.org/10.1177/1077801299005002002
Wuest, J., & Merritt-Gray, M. (2001). Beyond survival: Reclaiming self after leaving an abusive male partner. *The Canadian Journal of Nursing Research*, *32*(4), 79–94.
Yeager, K. R., Roberts, A. R., & Roberts, B. S. (2015). A comprehensive model for crisis intervention with battered women and their children. In K. Yeager (Ed.), *Crisis intervention handbook: Assessment, treatment, and research* (4th ed., pp. 459–501). Oxford University Press.
Zaidi, A. U., Fernando, S., & Ammar, N. (2015). An exploratory study of the impact of information communication technology (ICT) or computer mediated communication (CMC) on the level of violence and access to service among intimate partner violence (IPV) survivors in Canada. *Technology in Society*, *41*, 91–97. https://doi.org/10.1016/j.techsoc.2014.12.003
Zorn, K., Wuerch, M., Faller, N., & Hampton, M. (2017). Perspectives on regional differences and intimate partner violence in Canada: A qualitative examination. *Journal of Family Violence*, *32*(6), 633–644. https://doi.org/10.1007/s10896-017-9911-x

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