EXAMINING THE USE OF VIRTUAL CARE INTERVENTIONS TO PROVIDE TRAUMA-FOCUSED TREATMENT TO DOMESTIC VIOLENCE AND SEXUAL ASSAULT POPULATIONS

Preliminary Findings of a Rapid Knowledge Synthesis

June 2020
Exercising the Use of Virtual Care Interventions to Provide Trauma-Focused Treatment to Domestic Violence and Sexual Assault Populations

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Timeline
This synthesis was prepared over a 30 business-day timeframe.

Funding
We are grateful for the funding received from the Canadian Institutes for Health Research (CIHR) Knowledge Synthesis Grant: COVID-19 Rapid Research Funding Opportunity in Mental Health and Substance Use.

Conflict of interest
The authors declare that they have no professional or commercial interests relevant to the rapid synthesis. The funder played no role in the identification, selection, assessment, synthesis or presentation of the research evidence profiled in the rapid synthesis.

Acknowledgments
The authors wish to thank Karlee Tomkow and Winta Ghidei for assistance with identifying and extracting key findings from the literature included in the rapid synthesis.
Glossary

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Cognitive behavioral therapy</td>
<td>A broad label for types of psychological therapy (including cognitive processing, stress inoculation, exposure, and eye movement desensitization and reprocessing therapies) in which cognitions/thoughts are challenged and changed, and coping strategies are developed. Cognitive behavioral therapies are generally accepted as well-supported by robust scientific evidence for reducing symptoms of a number of psychological conditions such as depression, anxiety and post-traumatic stress disorder</td>
</tr>
<tr>
<td>Cognitive processing therapy</td>
<td>A type of cognitive behavioural therapy for treating post-traumatic stress disorder in which individuals exposed to violence or other forms of trauma, as well as survivors, develop a new understanding of their trauma and associated thoughts in order to reduce associated psychological distress</td>
</tr>
<tr>
<td>(Complex) Post-traumatic stress disorder (PTSD)</td>
<td>A psychological condition which is triggered by experiencing a traumatic event and often includes symptoms such as flashbacks, avoidance of traumatic reminders, and anxiety or being ‘on edge.’ Complex PTSD involves multiple, repeated or chronic traumatic events</td>
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<tr>
<td>Domestic Violence</td>
<td>Any situation where an individual employs abusive behaviour to control and/or harm a spouse or someone with whom they have an intimate relationship</td>
</tr>
<tr>
<td>Gender-Based Violence</td>
<td>Violence that is committed against someone based on their gender identity, gender expression or perceived gender.</td>
</tr>
<tr>
<td>Intimate Partner Violence</td>
<td>Physical violence, sexual violence, stalking, or psychological harm by a current or former partner or spouse. This type of violence can occur among heterosexual or same-sex couples and does not require sexual intimacy</td>
</tr>
<tr>
<td>Mobile (mHealth)</td>
<td>Internet or technology mediated approaches to provision of health interventions or resources</td>
</tr>
<tr>
<td>Sexual Assault</td>
<td>An assault of a sexual nature that violates the sexual integrity and safety of the person at risk</td>
</tr>
<tr>
<td>Trauma-focused treatment or therapy</td>
<td>A specific approach to therapy that recognizes and emphasizes understanding how the traumatic experience impacts a person’s mental, behavioral, emotional, physical, and spiritual well-being</td>
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Examining the Use of Virtual Care Interventions to Provide Trauma-Focused Treatment to Domestic Violence and Sexual Assault Populations

Key Messages

Questions
- What is the evidence on trauma-focused virtual care interventions to address domestic violence and sexual assault?
- What factors influence the effectiveness, feasibility and acceptability of trauma-focused virtual care interventions to address psychological risk and harm resulting from domestic violence and sexual assault?
- What is the experience of providers (clinical and non-clinical) and patients in using virtual care to provide trauma-focused treatment to diverse populations at-risk of domestic violence and sexual assault in the context of a global pandemic?

Importance of the issue
The COVID-19 pandemic has had a profound impact on the psychological and mental well-being of individuals and families, and the incidence of domestic and intimate partner violence (IPV) has increased since the start of the pandemic [1-3]. In Alberta alone calls to domestic and family violence hotlines during the COVID-19 pandemic have increased by more than 50% [4]. With the rapid shift to virtual care during the pandemic there is a need to examine the effectiveness, feasibility and acceptability of virtual care interventions across a range of diverse domestic violence and sexual assault populations, including interventions that incorporate gender-responsive approaches to trauma (e.g., cultural, historical, and immigration-related trauma). Towards this end, our knowledge synthesis aims to specifically understand the potential of trauma-focused virtual interventions that can rapidly be used to support domestic violence and sexual assault populations.

Preliminary Findings
- The rapid evidence review indicated that despite the broad range of negative effects associated with domestic and IPV, virtual care interventions are scarce and largely limited to online support tools that facilitate empowerment and self-efficacy of individuals who are currently in a violent or abusive relationship.
- Research evidence supports the provision of online psychological therapies for reducing psychological symptoms such as depression, anxiety and post-traumatic stress disorder (PTSD) resulting from domestic violence or sexual assault.
- Findings from the rapid evidence review indicate that treatment provided via videoconferencing is capable of achieving comparable gains that accrue during traditional in-person services. It is also worth noting that when videoconferencing technology is utilized to connect rural clients with distant specialists, the relevant comparison is not in-person services but rather, no psychological services at all.
- In one study that compared the same trauma-focused intervention delivered online/virtually vs. face-to-face found a minimally significant difference in outcome measures for mental health distress.
- RCTs comparing videoconferencing and in-person treatment are warranted, and inclusion of larger samples and structured clinical interviews are needed to strengthen conclusions drawn from the research literature. Many of the studies involved a small sample size of which can influence research outcomes.
• Provision of services via videoconferencing is also associated with a number of perceived challenges regarding the impact of distal services on the therapeutic relationship between providers and clients, confidentiality, and patient safety.
• Existing evidence of trauma-focused virtual care interventions (including mobile applications and decision support aids) for individuals and families exposed to domestic violence and sexual assault provided little to no knowledge of how these virtual care interventions can be promoted or offered by providers in a range of primary care and community settings.
• Some scholars have noted that virtual care interventions (such as mobile applications that support self-efficacy and coping skills) for this population is likely to be most effective when used to supplement or facilitate (rather than replace) in-person professional care.
• Stakeholder interviews conducted in Alberta helped to contextualize knowledge from the rapid evidence review support understanding of the experiences of providers and patients in using virtual care to treat trauma-related symptoms resulting from domestic violence and sexual assault. This includes a better understanding of the barriers and challenges for virtual care delivery for this at-risk population during the current and future pandemics.
1. Executive Summary

The objectives of the knowledge synthesis are to: (1) conduct a rapid review of existing trauma-focused virtual care interventions for the domestic violence and sexual assault population, and the factors influencing their acceptability, feasibility and effectiveness across a range of domestic violence and sexual assault populations; (2) conduct stakeholder interviews to understand the particular barriers and challenges with virtual care delivery among providers and patients; and (3) provide recommendations for the implementation of trauma-focused virtual care interventions to address raising rates of domestic violence and sexual assault during the COVID-19 pandemic and beyond.

A rapid review of the literature following the principles of rapid evidence assessment (REA) was undertaken from May–June 2020. REA provides a timely, valid and balanced assessment of available empirical evidence related to a particular policy or practice issue [5]. To contextualize the findings of our rapid review we conducted stakeholder interviews with clinical and non-clinical providers that serve the domestic violence and sexual assault population in the province of Alberta. The qualitative, semi-structured interviews will support understanding of the barriers or challenges experienced by providers in delivering virtual care to individuals at risk of domestic violence, including survivors during the current COVID-19 pandemic.

The knowledge synthesis will provide policy and decision-makers, as well as key knowledge users on our project, with a summary of the knowledge about trauma-focused virtual care interventions for domestic violence and sexual assault populations. There is a high urgency to support individuals and families at-risk of domestic violence and/or sexual assault during the COVID-19 pandemic and reported rates of domestic violence remain high across the globe [6].

The findings from the rapid review demonstrate that despite the broad range of negative effects associated with domestic and IPV, virtual care interventions that incorporate trauma-focused treatment are scarce and largely limited to online support tools that facilitate empowerment and self-efficacy of individuals who are currently in a violent or abusive relationship. Available online interventions that incorporate trauma-focused treatment for this at-risk group are limited in scope, and effectiveness data are preliminary in nature.
2. Purpose and Background

Across the globe, the Coronavirus (COVID-19) pandemic has been linked to increases in domestic violence reports, crisis calls and shelter intakes. Domestic and intimate partner violence (IPV) is a form of trauma that can result in significant mental health distress for victims. The presence of domestic violence has significant long-term psychological consequences that range from stress, frustration and anger to severe depression and post-traumatic stress disorder (PTSD) [7]. For children, domestic violence related trauma left unrecognized is cumulative and associated with social behavioral, emotional, and cognitive problems, persisting into adulthood (Rossman, 2001). Exposure to domestic violence is associated with a significant risk to children’s physical and psychological safety and well-being across the lifespan [8].

The COVID-19 pandemic had led to many community agencies and health professionals who previously provided support and/or services to domestic violence survivors struggling to find ways to reach and support many individuals and families at-risk. Families have been cut-off from community and support networks. With the rapid shift to virtual care during the pandemic there is a need to examine the effectiveness, feasibility and acceptability of virtual care interventions across a range of diverse domestic violence populations, including interventions that incorporate gender-responsive approaches to trauma (e.g., cultural, historical, and immigration-related trauma). Accessing care and health services through virtual mechanisms poses particular barriers for some individuals and families at risk of domestic violence, including domestic violence survivors seeking medical attention. For example, issues with confidentiality and privacy may be a challenge during physical distancing and social isolation. Other barriers include unstable internet connection in rural and remote locations, and cultural acceptability and appropriateness of virtual care tools for cultural/and or ethnic population groups [9].

Virtual care interventions, such as e-mental health programs, designed to reduce trauma-induced mental health symptoms among individuals and families either experiencing violence or who are at increased risk, have been developed. However, evidence of their effectiveness and acceptability across a range of diverse domestic violence populations is limited. Furthermore, how to effectively implement virtual care in safely addressing domestic violence and sexual assault whilst physical distancing restrictions during remain in place is unknown.

2.1 Review scope

*Domestic Violence* includes a number of different types of experiences that may reflect different needs for different populations. For example:

- intimate partner violence
- historical and/or intergenerational violence
- childhood sexual abuse
- gender-based violence
- family violence
- lived experiences of Indigenous peoples, refugees and immigrant populations, low-income groups, people living with disability, the elderly, and children

The definition of *trauma* defined here is the experiences that overwhelm an individual’s capacity to cope [10].
2.2 Review Questions

- What is the evidence on trauma-focused virtual care interventions to address domestic violence and sexual assault?
- What factors influence the effectiveness, feasibility and acceptability of trauma-focused virtual care interventions to address psychological risk and harm resulting from domestic violence and sexual assault?
- What is the experience of providers (clinical and non-clinical providers) and patients in using virtual care to provide trauma-focused treatment to diverse populations at-risk of domestic violence?

2.3 Methodology

A rapid review of the literature following the principles of rapid evidence assessment (REA) was undertaken from May–June 2020. REA provides a timely, valid and balanced assessment of available empirical evidence related to a particular policy or practice issue [5]. REA is a rigorous and explicit method that avails evidence required for policy recommendations in a short timeframe. The process is characterised by developing a focused research question, a less developed search strategy, literature searching, a simpler data extraction and quality appraisal of the identified literature [11]. To contextualize the findings of our rapid review we conducted stakeholder interviews with clinical and non-clinical providers that serve the domestic violence and sexual assault population in the province of Alberta (see section 2.8).

2.4 Search Strategy

As per our primary objective of this knowledge synthesis to examine trauma-focused virtual care interventions for the domestic violence and sexual assault population, an initial search result of the evidence combining keywords representing trauma-focused interventions, virtual care interventions and exposure to violence (domestic violence, sexual assault, family violence, and related childhood trauma) within the context of a pandemic or epidemic such as covid-19 yielded a small number of articles. Thus, three comprehensive search strategies were executed by a trained research librarian. The first search strategy was performed using keywords representing the concepts of “remote care delivery” AND “people experiencing domestic violence” AND “COVID 19 or pandemic* or epidemic* or quarantin* or ebola*”. For the second search strategy the same keywords were used without “COVID 19 or pandemic* or epidemic* or quarantin* or ebola*”. The third search strategy was executed using keywords representing the concepts “remote care delivery” AND “trauma informed care.” Searches were performed on the following databases: OVID Medline, OVID EMBASE, Ovid Global Health, Ovid PsycInfo, Cochrane Library (CDSR and Central), and EBSCO CINAHL. Additional search was also conducted using Google and Google Scholar to identify studies not published in indexed journals. Results were exported to Covidence review management software. Detailed search strategies are available in Appendix 1.

2.5 Screening and Study Selection

Two reviewers independently screened all potential articles assisted by Covidence — a web-based tool aimed to provide support with study identification and data extraction processes. In the case of disagreement, both reviewers read the paper and discussed until consensus was
reached. Full texts of eligible articles were independently screened by these two reviewers, and papers were included into this review if they satisfied all of the following inclusion criteria: (1) if they included trauma-informed intervention to individuals and families exposed to domestic violence, sexual assault and/or related childhood trauma; (2) if the intervention was delivered virtually; and (3) if the article was published in the English-language.

The first search strategy (virtual care interventions + experience of violence + covid-19) identified 138 potentially relevant articles. The second search strategy (virtual care interventions + experience of violence) resulted in 1057 potentially relevant articles. The third search strategy (trauma informed interventions + experience of violence) identified 236 potentially relevant articles. A review of the titles and abstracts resulted in the selection of n=52, n=205 and n=44 articles respectively for full text assessment. The full text was retrieved for all articles, and after a careful review of each article, 20 studies that incorporated trauma focused virtual interventions to support individuals and families exposed to domestic violence, sexual assault and/or related childhood trauma from all three search outputs were included in the review. The PRISMA Flow Diagrams [12] provide a flow chart for the literature search (Appendix A).

2.6 Quality Review and Data Extraction
The quality of studies was assessed using the Critical Appraisal Skills Program (CASP) quality assessment tools (CASP Systematic Review Checklist, CASP Qualitative Checklist, and CASP Randomized Controlled Trial Checklist) [13]. The developers do not recommend using a scoring system when applying this tool. Thus, included studies were assessed based on the clarity of research objectives, the appropriateness of data collection strategy for the study design, quality of the methodology, whether findings clearly correspond to objectives and if the research is valuable and/or applicable to local settings [13].

The following information was extracted from included studies into a standard extraction form (Appendix B): author(s), publication date, publication type, population studied, country, study setting, type of virtual care intervention, if the virtual care solution was implemented in the context of a pandemic, outcome measures and results, equity considerations and challenges or barriers to implementing the virtual care intervention.

2.7 Stakeholder Interviews
To better understand the barriers and challenges that providers might experience in delivering virtual care to individuals at risk of domestic violence and survivors; as well as the barriers to access for this population, interviews were conducted with key stakeholders within Alberta. We have planned to conduct 15-20 interviews and to date we have conducted six interviews with primary care provided, mental health therapists and psychologists in the province of Alberta. Interview participants were recruited from existing relationships among the research team. All interviews were completed via telephone or videoconference and lasted approximately one hour in duration. These interviews have allowed us to contextualize our review findings, ensure that the results are grounded in everyday practice, and provided a different lens to examine current knowledge on this topic.
3. Rapid Review Findings

3.1 Trauma-Focused Online Interventions for the Prevention of Domestic Violence and Sexual Assault

Findings from two systematic reviews and RCT studies of internet-based interventions highlighted several important online support tools such as apps for delivering needed safety services to individuals who are highly impacted by domestic violence, IPV or sexual assault. These online interventions predominantly focused on safety planning, which involves clarifying the choices individuals have for leaving an abusive relationship. Safety planning is defined as a dialogic process that informs and supports an individual exposed to violence or abuse by identifying behaviours they can adopt to increase safety and decrease exposure to violence for themselves and their family (i.e., children) at risk [14]. The educational apps reviewed incorporated psychoeducation modules about PTSD, stress management, and the impact of trauma on emotions and relationships; as well as aimed to promote self-efficacy and empowerment of individuals to make difficult decisions about leaving an abusive relationship. These educational apps are not considered self-help tools, but rather incorporate a collaborative interface for health professionals and users to interact [15]. Furthermore, it is important to note that all safety decision aids studied were only administered to women exposed to domestic violence, IPV or sexual assault.

3.1.1 Internet-based safety decision aids (SDAs):

A recent systematic review by Rempel et al. [16] identified eleven interventions focused on personal safety planning that enable women’s safety while in an abusive relationship. Of the eleven interventions, six interventions focused on personal safety planning that would enable women’s safety while remaining engaged within the abusive relationship; seven interventions focused on safety planning to support women to physically leave an abusive relationship; and four interventions focused on the provision of services and resources to support women in the immediate aftermath of leaving an abusive partner. None of the interventions reviewed focused on supporting women to “move on” from an abusive relationship and none of the interventions appeared to consider the broader social implications related to IPV.

Findings from RCT studies of the following SDAs reported positive outcomes on reduced depression, fear and anxiety, as well as increased self-efficacy.

- **iCAN Plan 4 Safety**, a Canadian developed personalized safety decision support aid intended to help women assess their particular situation in terms of setting priorities and safety risks through the use of a mobile app [17].
- **HELPP (Health, Education on Safety, and Legal Support and Resources in IPV Participant Preferred)** intervention is comprised of six modules delivered by e-mail once a week for 6 weeks and focus on education on safety, self-reflection and self-evaluation of risk for mental health distress. When delivering the HELPP intervention online compared to face-to-face there were consistent significant improvements in all outcome measures (i.e., anger, anxiety, depression, personal and social support) in a random sample of female survivors of IPV who received the HELPP intervention via e-mail and
less consistent significant improvements in IPV survivors receiving HELPP face-to-face [18].

- I-DECIDE aims to help women self-inform, self-reflect, and self-manage, and focuses more on healthy relationships, rather than only safety decisions. The intervention consists of three modules: a healthy relationship tool, a safety module and a priority-setting exercise. The healthy relationship tool provided information on a healthy versus unhealthy relationship, and asked women to reflect and rate the health of their own relationship, their level of fear, and level of safety using visual analogue scales. This intervention adds to the online counselling techniques of motivational interviewing and non-directive problem solving, and also provides messaging tailored to each woman’s individual situation (e.g., level of intimate partner violence and danger, and whether the woman has children) and an individualised plan of action that is responsive to a woman’s priorities and plans for her relationship (staying or leaving) and location [19]. There was no mention by the authors if the intervention was tested among women from different ethnic, cultural or socioeconomic groups.

- HOPE: Helping to Overcome PTSD through Empowerment is a twelve 60-90 minute individual sessions conducted twice per week over a maximum of eight weeks and involves three stages of recovery: (1) re-establishing safety and a sense of self-care; (2) remembering and mourning; and (3) reconnection safety needs, does not include exposure therapy, and focuses heavily on women’s empowerment [20]. This intervention has been tested among underserved women in the US. The authors note that it is important online support tools and approaches to trauma recovery are culturally-tailored to different communities and acknowledge the values and healing traditions of communities.

The authors from these studies concluded that internet-based SDA apps were reported to be safe, acceptable and accessible by its users. Digital SDAs allow both privacy and real-time access to resources and may be appropriate for a hard-to-reach population disclosing information about their experience with violence or abuse. Qualitative findings from the I-DECIDE intervention indicated that participants found the intervention to be supportive and a motivation for action. However, there is limited evidence from these studies to suggest that online decision aids can reduce decisional conflict among individuals who are currently in a violent or abusive situation.

### 3.2 Online Psychological Therapies for Individuals with more Severe Needs Such as Complex Post-traumatic Stress Disorder (PTSD)

Evidence supports the provision of online psychological therapies for reducing psychological symptoms such as depression, anxiety and PTSD resulting from domestic or sexual violence [15, 19, 21-24], especially when the needs of the person exposed to such violence are complex, severe or delayed (e.g., exhibiting symptoms of complex PTSD, have experienced multiple or ongoing traumas, and/or in victims who have experienced childhood sexual abuse). Effective online psychological therapies in these circumstances include cognitive processing therapy, cognitive behavioural therapy, and telepsychotherapy (e.g., real-time (synchronous) technologies, such as videoconferencing) [25-28]. Trauma-focused treatments were also
delivered using a range of virtual technologies such as telehealth, mobile health (mHealth), and videoconferencing [25, 27-34].

### 3.2.1 Mobile Health (mHealth)

Mobile health (mHealth) technologies are increasingly being used for domestic violence or IPV prevention to optimize screening, educational outreach, and linkages to care. Scholars advocating for virtual solutions to reaching domestic violence and sexual assault populations have noted that individuals exposed to such violence and abuse are often isolated by their partners, have limited friendships or social supports, and limited access to social resources; thus increasing global access to digital technologies provides an avenue to search for information, report experiences of violence, or receive treatment for domestic violence-related mental health conditions such as anxiety and depression. In one recently published systematic review of mobile (mHealth) interventions, the findings showed that dropout rates in mHealth interventions were lower than in-person interventions. The authors attributed this to participants feeling more comfortable to disclose their circumstances through virtual mechanisms than in-person [29].

Findings from a formative evaluation of a new trauma-informed Smartphone based mobile application called THRIVE was tested on eight IPV survivors and 16 hospital-based staff (nine health care providers, four social workers, one mental health provider, and three IPV advocates)[35]. Participants were asked to provide feedback on the application’s content, design, safety features and applicability. The purpose of the application was to address the unmet health needs and improve the well-being of mothers who have experienced IPV. Thrive includes three sections: Myself (maternal self-care, stress coping skills), My Child (stress signs in children, talking to children about IPV, mother–child dyadic communication), and My Life (hospital and community-based resources). This was the only study of an virtual care intervention that included IPV survivors in the development of the application, demonstrating a focus on user or patient-centered care.

### 3.2.2 Videoconferencing and telemental health

Results from primary studies support the effectiveness of videoconferencing as a medium for providing evidence-based trauma-focused treatment to domestic violence and sexual assault populations [29, 32, 36, 37]. Videoconferencing can be used to reach patients with barriers to care that may include stigma, language, and where one lives. In addition, these technologies can be used to deliver empirically based treatments for PTSD. The Wyoming Trauma Telehealth Treatment Clinic (WTTTC) [32] has been cited as a successful example of a program that delivers trauma-focused treatments using remote videoconferencing to rural survivors of domestic violence and sexual assault. The research team studied the effectiveness and feasibility of using videoconferencing to provide treatment to rural domestic violence and sexual assault populations. A recent study of the WTTTC recruited 15 participants, who were clients of the clinic, and received psychological services via videoconferencing from distal domestic violence and rape crisis centers located in the state of Wyoming. Participants completed measures of PTSD and depression symptom severity and client satisfaction. The authors reported large treatment gains among clients on measures of PTSD and depression symptom severity after receiving psychological services via videoconferencing. Additionally, clients reported a high degree of satisfaction with videoconferencing administered services. Findings from this study
suggest that videoconferencing provides an effective means to deliver services to underserved rural domestic violence and sexual assault populations.

The use of telemental health has also been reported to reduce mental health care disparities by increasing access to culturally and linguistically competent clinicians for those living in rural and remote communities [38]. Furthermore, of the studies that examined the effectiveness and feasibility of videoconferencing as a means of delivering trauma-focused treatment to this at-risk population [32, 36, 38] the findings indicate that videoconferencing is capable of achieving comparable gains that accrue during traditional in-person services. However, it is worth noting that when videoconferencing technology is utilized to connect rural clients with distant specialists, the relevant comparison is not in-person services, but rather, no psychological services at all.

3.3 Challenges or Barriers to Delivering Virtual Care to Address Domestic Violence and Sexual Assault

Among the studies that identified barriers and challenges to delivering virtual or remote care interventions (n=7), several accessibility barriers were noted. User attrition was identified as a potential challenge to implementing web-based applications of domestic violence and sexual assault interventions. Barriers to delivering online or web-based applications to some domestic violence and sexual assault populations, particularly in rural communities, included access to reliable internet or devices such as smart phones, tablets and computers to use the online application [14, 15]. Some scholars have also noted challenges related to privacy, confidentiality and patient safety when using videoconferencing [36], which can be mitigated by creating ethical practice guidelines for professionals delivering the virtual program and conducting comprehensive intake procedures to assure appropriateness for treatment for patients [36]. Specific equity considerations (including language, socioeconomic status, cultural-relevance, geography, and technological access) when delivering virtual/remote care to individuals and families exposed to domestic violence or sexual assault was seldom discussed in the literature. The exception is with studies that examined virtual care delivery in rural and remote settings. Furthermore, some scholars have noted that internet-based applications and e-mental health programs are likely to be most effective when used to supplement or facilitate (rather than replace) professional care and provider-patient engagement. Brigone and Edleson [15] referred to this as ‘supportive accountability’ – where there is an interface between providers and patients, and the online tools or programs are not solely approached as a self-help tool.

3.4 Preliminary Findings from Stakeholder Interviews

3.4.1 Experience with delivering trauma-focused virtual care

Clinical and non-clinical providers shared their experiences with delivering care or providing treatment to domestic violence and sexual assault clients during the current pandemic. They shared both positive aspects of virtual care and unique challenges that they or their clients have faced in using virtual care. Positive feedback from clients focused on the accessibility of virtual care sessions or appointments. Providers described how their clients felt more at ease talking about their trauma-related experience through virtual mechanisms. One provider describes,
“some people have expressed that they feel more comfortable, especially if they have diagnoses such as anxiety, to be able to initially develop the relationship with their online coach. Other people feel disconnected from not being in person.” (Clinical provider 1). On the other hand, providers also raised concerns about the dehumanization of virtual care with respects to their relationship with their clients. Issues about patient safety were also shared, particularly with respects to delivering trauma-focused treatment online or through virtual sessions. One provider explains:

“…because of the sensitive nature of the type of therapy, there’s some ethical considerations around safety and different things that have to be managed in a very different way. And depending on the acuity of the mental health symptoms, I think it’s important for those things to be seriously considered in an online platform.” (Non-clinical provider 3)

Organizational changes were required to support virtual care delivery and posed specific barriers among providers, as well as shaped their personal experience with virtual care. The rapid pace at which their clinic or organization had to adopt and support virtual care delivery meant that all staff had to be trained to deliver virtual care in a short amount of time, and the restructuring of care delivery had to be considered. A common barrier that all stakeholders described was related to funding to support virtual care delivery within their organization. They described having received minimal to no government funding to support the adoption of virtual care. The following quotes from two primary care providers explained how prior to COVID-19 physicians were not well-supported to deliver virtual or remote care to clients and this changed following the pandemic, enabling physicians to connect with their patients virtually:

“We only had payment models that would support 15 emails per week per doctor or 15 phone calls per week per doctor. So there was never a payment method that you could support a practice to do virtual medicine through. Then as the pandemic rolled along the government released a payment method to do a virtual appointment.” (Clinical provider 2)

“With the onset of COVID, government changed the rules and took the cap off of the billing code, so we can use telephone calls, and actually made a ten-minute phone call equal to the same as if it was a face-to-face in-person visit. So again, this all made it feasible to provide virtual care in this context.” (Clinical provider 4)

3.4.2 Specific barriers to delivering virtual care for some population groups

Providers spoke about specific barriers or challenges they encountered when shifting their psychological counselling services to a virtual mode of delivery. The following quote by one participant highlights what she calls ‘a digital divide’ among different population groups, particularly among underserved populations she serves:

“We’ve also recognised the massive digital divide that exists amongst our clients. Many of our sex work clients had no access to safe or effective digital means to get in touch with us, or to sustainably be in touch with us enough to be able to do a session online. So, they can call but they’re either living on the street or living unsafely or relying on free hotspots and not having data and all of those sorts of things. And then for some of our remote and rural
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... communities, even if we could send a client a tablet to be able to connect with us online, they need effective data or Wi-Fi, or whatever it is. And some rural and remote places in Alberta definitely don’t have that. So, the digital divide became really evident.” (Non-clinical provider 3)

All providers described the challenges that some clients faced in attending virtual care sessions because of concerns with safety and privacy. They shared some approaches their organization took to mitigate some of these challenges for their most vulnerable clients.

“I think that we had to deal with challenges of figuring out consent, figuring out safety, understanding if the abuser was there. We had to add extra fields into our system so that we now have safe words with all of our clients so that if I go out for example, with you right now, your abuser could be sitting over your shoulder, and I don't know it. So, you and I have to figure out a safe word to make sure that at any point, we use it at the beginning, you can tell me during the time. But those are the kind of things we had to figure out very quickly.” (Clinical provider 2)

In light of the equity considerations that need to be accounted for when delivering virtual care to diverse population groups, one provider explained that online supports or virtual interventions to address trauma-related symptoms for domestic violence are “in no way able to take over or replace in-person services regarding treatment or counselling for trauma.” The provider further explains that depending on the type of trauma symptoms experienced by the client, it is crucial to consider if an online platform for treatment is appropriate.

3.5 Considerations for Research and Policy

Based on preliminary findings from our rapid evidence review and stakeholder interviews our research team has identified a few considerations for future research and policy decisions on the use of virtual care for the domestic violence and sexual assault populations during the current pandemic and into the future.

- Virtual care interventions for this population should not be used to completely replace in-person professional care for trauma and is most effective when used to supplement or facilitate care or supports.
- Most of the research evidence on effective implementation of trauma-focused virtual care has been examined in rural and remote communities. Therefore, guidance from available evidence for how to deliver virtual care interventions across a range of diverse domestic violence and sexual assault populations, including interventions that incorporate gender-responsive approaches to trauma (e.g., cultural, historical, and immigration-related trauma) is not provided.
- The findings of our rapid evidence review and the stakeholder interviews demonstrated positive aspects from delivering care virtually to this population. This warrants future research to evaluate a range of virtual care interventions (including e-mental health) across diverse population groups to improve our understanding of their effectiveness and acceptability. This will also strengthen the evidence-base for virtual care solutions that benefit this at-risk population.
There is strong evidence from RCT trials to support the provision of online psychological therapies for reducing psychological symptoms such as depression, anxiety and post-traumatic stress disorder (PTSD) among individuals exposed to domestic violence or sexual assault. These online therapies can be safely used to support individuals and families in violent or abusive situations.
References

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Search Strategy 1: PRISMA Flow Diagram

Records identified through database searching (n = 168)

Records after duplicates removed (n = 138)

Records screened (n = 138)

Records excluded (n = 86)

Full-text articles assessed for eligibility (n = 52)

Full-text articles excluded, with reasons (n = 43)

Relevant Studies with or without trauma-focused intervention (n = 9)

Studies included in synthesis (trauma-focused interventions only) (n = 1)
Search Strategy 2: PRISMA Flow Diagram

Records identified through database searching
(n = 1614)

Additional records identified through other sources
(n = 1)

Records after duplicates removed
(n = 1057)

Records screened
(n = 1057)

Records excluded
(n = 849)

Full-text articles assessed for eligibility
(n = 205)

Full-text articles excluded, with reasons
(n = 127)

Relevant studies including non-trauma focused interventions
(n = 78)

Studies included in synthesis (trauma-focused interventions only)
(n = 9)
Search Strategy 3: PRISMA Flow Diagram

Records identified through database searching (n = 351)

Records after duplicates removed (n = 236)

Records screened (n = 236)

Records excluded (n = 192)

Full-text articles assessed for eligibility (n = 44)

Full-text articles excluded, with reasons (n = 34)

Studies included in synthesis (n = 10)
### Author(s) | Date of Publication | Title | Type of Publication | Population Studied and Country | Setting (e.g., Primary Care, community) | Virtual Care Intervention/TechnologyImplemented to Address Domestic Violence and/or Intimate Partner Violence | Outcomes Measured and Results (what do the authors include about the a) acceptability, b) feasibility, and c) effectiveness of the intervention) | Equity Considerations (i.e., gender-responsive approaches to trauma, subpopulation differences; inclusion of vulnerable population groups) | Challenges or Barriers to Implementing Virtual Care to Address Domestic Violence
---|---|---|---|---|---|---|---|---|---
Anderson, Krause, Krause, Welter, McClelland, et al. | 2019 | Web-Based and mHealth Interventions for Intimate Partner Violence Victimization Prevention: A Systematic Review | Systematic Review | Population of study were adults or youth in romantic relationship (including sex workers, same-sex couples, pregnant and prenataal mothers, perpetrators and victims). The authors did not provide the complete list of countries, however, they indicated that 23 studies were conducted in USA and only one was from low- or middle-income country (Cambodia). | Outpatient medical Psychology/therapy Academic/research Community organization | Yes, the systematic review was focused on mHealth interventions for IPV. The authors provide their findings as following: "The most commonly identified mHealth components were web-based educational content that was not responsive to user input (e.g., self-paced, click-through tutorials; and interventions where the outcome was dependent on use of computer hardware (e.g., tablet-based screening that automatically flagged a health-care provider)....two studies developed or tested a proprietary or made-for-purpose prevention app (including one proof-of concept study with no field testing), and no studies used major social media/communication platforms (e.g., Facebook, Instagram, and WhatsApp) to deliver their respective interventions. The remaining studies programmed web- or hardware-accessible platforms (e.g., e-mail) without developing new software (or else did not describe the platform)" (pg. 4-5). Three interventions included CBT (2 studies delivered CBT through telehealth video and one through web-based system). | The authors state the following: "Feasibility and acceptability were found to be generally high where assessed (23% of studies, n=7). There was limited evidence around whether mHealth interventions better addressed population needs compared to conventional interventions. mHealth tools for IPV prevention are especially acceptable in health-care settings, on mobile phone platforms, or when connecting victims to health care. Despite enthusiasm in pilot projects, evidence for efficacy compared to conventional IPV prevention approaches is limited. A major strength of mHealth IPV prevention programming is the ability to tailor interventions to individual victim needs without extensive human resource expenditure by providers." (pg. 1). In general, mHealth interventions are acceptable and feasible in terms of ensuring anonymity, easy access to resources and ability to provide personalized service. The authors used equity lenses to assess their findings. They reported that interventions that were "victim oriented" was focused only on women (no other genders included); 77% of the interventions indicated they were exclusively delivered in English and only one was delivered in Spanish. Three studies included pregnant women, and three considered cultural adaptation for the included minority women. One study was from low-income country (Cambodia). | The authors indicated that barriers were not clearly described in the included studies. However, they highlight "unacceptable platforms, especially if participants have to download software or learn how to use new hardware" (pg. 10) are potential barriers to implementing mHealth. That being said, dropout rates in mHealth interventions are lower than in-person interventions. This was explained as people are more comfortable to disclose their circumstances virtually better than in-person.
# Examining the Use of Virtual Care Interventions to Provide Trauma-Focused Treatment to Domestic Violence and Sexual Assault Populations

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<tr>
<td>Bloom, Glass, Case, Wright, Nolte &amp; Parsons</td>
<td>2014</td>
<td>Feasibility of an Online Safety Planning Intervention for Rural and Urban Pregnant Abused Women</td>
<td>Evaluation Study</td>
<td>Pregnant mothers at risk of DV in rural and urban area</td>
<td>Community</td>
<td>The researchers used and evaluated a tailored version of the Internet-based safety decision aid. This tool was initially developed with input from IPV survivors, domestic violence advocates, and IPV experts. This tool provides personalized &quot;safety plan, including assessment of women’s safety behaviors, a priority-setting activity, and risk assessment&quot; (pg. 2). The program was more accessible to urban mothers compared to rural. The authors attribute this to &quot;isolation and/or concerns about privacy, anonymity, or confidentiality may also have increased rural women’s reluctance to identify friends or family as safe contacts or to use less private options, such as a computer at a family member’s or friend’s house, library, or a public health department&quot; (pg. 7).</td>
<td>The study focused on vulnerable population (pregnant mothers, rural pregnant mothers). The tool also includes a feature that is specific for mothers in same sex relationships. However, the authors also highlight that this tool is not accessible to women who are not computer literate or lack Internet or safe computer access, and those who do not know English. That being said, such tools could also be &quot;attractive to women of color is critically important, given that abused pregnant racial minorities are less likely to access help from the formal systems where they might receive safety planning“ (pg. 8).</td>
<td>Barrier in accessibility in terms of access to internet or devices (computer, mobile).</td>
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<tr>
<td>Brignone &amp; Edleson</td>
<td>2019</td>
<td>The Dating and Domestic Violence App Rubric: Synthesizing Clinical Best Practices and Digital Health App Standards for Relationship Violence Prevention Smartphone Apps</td>
<td>Evaluation Study</td>
<td>N/A</td>
<td>N/A</td>
<td>This review specifically assessed smartphone apps for dating and domestic violence. In general, the authors indicate that there is important requirement for an app to be eligible to serve DV population the: the app's ability to address the safety of users (e.g. put into consideration that the perpetrator may have access to the victim's smartphone). The authors rated all the included apps as low-quality, middle quality and high-quality in terms of performance as apps and their performance as interventions for dating and DV. The authors indicated that most of the apps included in the study were difficult to find on App store reducing their visibility and accessibility. Also, many of the apps have limited scope (target), i.e. female victims with male perpetrator. In terms of App efficacy, the authors highlight &quot;because smartphone apps do not undergo a formal vetting process before release, the health- or safety-related quality of their content is not guaranteed&quot; (pg. 8). Apps that provide collaborative measures and that are interactive have better health benefits and are used more frequently, thus are rated higher. Examples of these apps are LifeFree, ASK, Youth Pages. On the other hand, apps that were not properly developed such as: The authors highlighted gender-gap in interventions currently available through an app (female victim focused). Additionally, they addressed the issue of applicability of intervention content based on the different contexts of users. In this case, apps such as Circle of 6 and Circle of 6 U, LiveFree and Youth Pages were identified as being mindful of &quot;their users, their users’ context, the desired outcomes of the intervention and the appropriateness of their theory of change to an app-based platform&quot; (pg. 10).</td>
<td>User attrition was identified as a potential challenge to implementing app-based DV interventions. The authors state, &quot;app-based and other eHealth interventions are likely to be most effective when used to supplement or facilitate (rather than replace) professional care, a concept known as supportive accountability&quot; (pg. 8). In terms of technical quality, the authors state, &quot;smartphone industry norms predict regular hardware updates and frequent software updates; these may change the display of user interfaces programmed prior to the update and the nature of interfaces with which users expect to interact. As a result, apps that are not regularly updated may</td>
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<tr>
<td>Constantino, Braxter, Ren, Burroughs, Doswell, Wu, ... &amp; Greene</td>
<td>2015</td>
<td>Comparing Online with Face-to-Face HELPP Intervention in Women Experiencing Intimate Partner Violence</td>
<td>RCT</td>
<td>Female survivors of IPV (who are not living with perpetrator) in Pittsburgh, Pennsylvania, USA</td>
<td>Participant Home (computer)</td>
<td>The intervention group received online version of the HELPP (Health, Education on Safety, and Legal Support and Resources in IPV Participant Preferred) intervention. The intervention consisted of six modules: (1) Personal Thoughts, Emotions, and Behavior; (2) Interpersonal Relationships and Healing in Telling; (3) Health in HELPP; (4) Education on Safety in HELPP; (5) Legal Matters in HELPP; and (6) Community and the A-B-</td>
<td>iHope and WIC which tend to be more harmful to survivors by proving advice contrary to evidence-based practice. These apps include &quot;victim-blaming language and recommendations to seek couples counseling or anger management&quot; (pg. 9). Therefore, the authors recommend that &quot;app consumers, especially those recommending apps to other potential users, must be meticulous about which apps they recommend&quot; (pg. 9). In terms of App security, some app features such as push notifications, and GPS can put victims at higher risk because the perpetrator can track, access, or view the lock screen of the victim’s phone. &quot;For this reason, app features such as passwords, hidden panels, no-cost accessibility and the user’s ability to disable push notifications, location access, and other features are critically important&quot; (pg. 9).</td>
<td>The researchers enrolled only female survivors (45% Asian, 32% White, and 23% Black). All survivors had protection order against their perpetrators. The survivors had to speak and read English and own a computer with internet connection to be able to participate in this study. Thus, it may not have been accessible to people from lower socioeconomic status or those with language barrier.</td>
<td>experience flaws in their display and outdated interfaces that may no longer be natural to users. These issues affect apps (such as Daisy and Over the Line) that in all other ways are considered high quality by this review&quot; (pg. 9). Also, most apps do not store user data with adequate security provisions, which is potentially harmful to the users.</td>
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The researchers used the WHO ecological model to assess research outcome. At the personal level they measured for anxiety and depression; at the interpersonal level they measured for anger and personal support; and at the community level they measured for social support and employment. "The HELPP intervention (1) decreased anxiety, depression, anger, and (2) increased personal and social support in the Online group. The HELPP information and intervention was shown to be feasible, acceptable, and effective."

The researchers did not discuss challenges or barriers to implementation; however, they identified some limitations of the study which include: (1) due to the short duration of the intervention (6 wks.) they could not be sure how sustainable the outcomes could be; and (2) they indicate having a follow-up would have provided better understanding of how long the outcomes could last. |
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<tr>
<td>Hassija &amp; Gray</td>
<td>2011</td>
<td>The Effectiveness and Feasibility of Videoconferencing Technology to Provide Evidence-Based Treatment to Rural Domestic Violence and Sexual Assault Populations</td>
<td>Primary Research</td>
<td>Rural survivors of domestic violence and sexual assault in Wyoming USA</td>
<td>Rural domestic violence and rape crisis centers (Wyoming Trauma Telehealth Treatment Clinic (WTTTC))</td>
<td>Female survivors (n=15) of domestic violence and sexual assault were given four sessions of trauma-focused treatment using remote videoconferencing</td>
<td>Cs of Empowerment. These models were delivered through email weekly. effective among IPV survivors compared with participants in the [control] group” (pg. 430).</td>
<td>Participants in this study were all female and 80% were white residing in rural Wyoming. Additional information on their socioeconomic, education, employment, etc. status was not provided. Thus, it is not clear if an equity lens was applied in delivering the trauma-focused treatment.</td>
<td>The authors did not specifically discuss implementation barriers; however, they were only able to enroll 15/39 participants into the full study because &quot;clients [were] unable to commit to an extended course of therapy by virtue of relocation, unyielding work schedules, etc.” (pg. 3). Which could be considered as a challenge when providing such care to rural residents. Also, the authors highlight that virtual delivery of trauma focused treatment may not be safe for suicidal survivors because of &quot;unclear ability to manage such crises distally” (pg. 5).</td>
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<tr>
<td>Hegarty, Tarzia, Valpied, Murray, Humphreys, Taft, ... &amp; Glass</td>
<td>2019</td>
<td>An online healthy relationship tool and safety decision aid for women experiencing intimate partner violence (I-DECIDE): a randomized controlled trial</td>
<td>RCT</td>
<td>Women (16-50 yrs. old) in IPV relationships, with safe access to computer/internet and understood English. In Australia</td>
<td>Wherever participants could find safe access to computer/internet</td>
<td>Online interactive healthy relationship tool and safety decision aid (I-DECIDE)</td>
<td>&quot;The intervention website consisted of modules on healthy relationships, abuse and safety, and relationship priority setting, and a tailored action plan. The control website was a static intimate partner violence information website&quot; (pg. 301). The hypothesized outcome was that the I-DECIDE program would increase self-efficacy and improve depression, fear, and helpful actions. However, results show that the intervention was not effective in comparison with the control group. That being said, the participants in both study arms improved their scores for self-efficacy, depression, and fear of partner over time and had better perceptions of support. The authors state, &quot;evidence to date suggests that in the general population, online interactive intimate partner violence interventions are no more effective than static intimate partner violence websites in reducing women’s exposure to violence or victimization, improving mental health symptoms, or strengthening self-efficacy. However, these interventions are acceptable to women and can be safely used. There is a small amount of evidence that online decision aids can reduce decisional conflict, but how useful this outcome is for women remains to be elucidated. Further research is urgently needed into meaningful outcomes and helpful components in online intimate partner violence trials&quot; (pg. 302).</td>
<td>This intervention did not apply equity lens to enrolling participants, the participants were women, with access to safe computer and/or internet, and understood English.</td>
<td>Challenges and barriers to implementation were not discussed.</td>
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<td>Hill, Zachor, Jones, Talis, Zelazny &amp; Miller</td>
<td>2019</td>
<td>Trauma-Informed Personalized Scripts to Address Partner Violence and Reproductive Coercion: Preliminary Findings from an Implementation Randomized Controlled Trial</td>
<td>RCT</td>
<td>English-speaking females, ages 16–29 years) in Chicago, Illinois, USA</td>
<td>Family Practice clinic</td>
<td>The virtual care was provided using an interactive app that facilitated discussion between provider and client. Study participants were randomized either into a Trauma-Informed Personalized Scripts (TIPS)-Plus or TIPS-Basic. Both study arms received an app prompted tailored provider scripts, and those in the (TIPS)-Plus received psychoeducational messages in addition. The app randomized individual participant either study arm, &quot;then presented questions about the patient’s sexual/reproductive health and experiences with IPV and RC; her responses triggered a series of specialized scripts. These scripts would prompt the provider to discuss specific topics, such as fear, safety, harm reduction strategies, and universal education about IPV/RC, without necessitating disclosure during the visit; only the scripts, not the patient’s specific responses, were shown to the provider. Patients assigned to TIPS-Plus also received psychoeducational feedback on healthy/unhealthy relationships while answering questions on the tablet-based app. The messages were embedded into the app and tailored to their responses&quot; (pg. 2).</td>
<td>To be clear this study aimed to assess the effectiveness of the app in prompting discussion between provider and client on sensitive topics such as IPV. In that sense, the researchers did not find statistically significant difference in disclosure of IPV by participants in either study arm. They indicate, &quot;the lack of significant findings points to the extraordinary barriers patients have to overcome to initiate a conversation about harmful partner behaviors, including fear of judgment by providers, fear of retribution by a partner, and societal stigma more generally&quot; (pg. 870). However, they note that their research can contribute to &quot;the larger evidence base on how to utilize apps to provide patients with personalized, tailored, health education messages&quot; (pg. 872).</td>
<td>Participants were all young female (16 - 29 years old); 70% were white and all spoke English.</td>
<td>Barriers and challenges with implementation were not discussed</td>
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<tr>
<td>Jones, Shealy, Reid-Quinones, Moreland, Davidson,</td>
<td>2014</td>
<td>Guidelines for Establishing a Telemental Health Program to Provide Evidence</td>
<td>Other</td>
<td>Youth and Families exposed to trauma, South Carolina, USA</td>
<td>Not specifically discussed, but this paper is more focused on providing Guidelines on how to setup, use and deliver trauma focused, cognitive-behavioral therapy (TF-CBT) via telemental health</td>
<td>There is no discussion of outcomes because this is a guideline. However, it may be important to include here the recommended guidelines and COPE the community agency that provided the virtual care focuses its services to underserved populations (ethnic minorities, individuals)</td>
<td>Challenges and barriers were not discussed because this was not an implementation study.</td>
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<td>López, ... &amp; de Arellano</td>
<td>2016</td>
<td>Based Therapy for Trauma-Exposed Children and Families</td>
<td>guidelines for how to setup evidence-based trauma-focused telemental health.</td>
<td>videoconferencing technology through an existing community outreach program is discussed in this paper.</td>
<td>the background of the community outreach program that participated in this program development and delivery. &quot;The Community Outreach Program-Esperanza (COPE) is a community-based program in South Carolina that provides evidence-based, trauma-focused assessment, therapeutic interventions, and referral for youth ages 4–18 and families who have experienced a range of traumatic events&quot; (pg. 3). COPE serves a range of underserved communities, however, was not able to reach some families who live far from the center. Therefore, they introduced encrypted, confidential videoconferencing technology to serve more people in need. Based on the experience of COPE in delivering remote trauma focused care, the authors provided the following guidelines for setting up telehealth services: (1) Make sure to establish and/or utilize partnership with communities in need; (2) Ensure to have a clear understanding of all expectations from all parties of the partnership; (3) Ensure to have the necessary technological and equipment setup; (4) Ensure to have the necessary videoconferencing software; (5) &quot;The physical space of the satellite clinic in which services are conducted should mimic a therapy room as much as possible&quot; (pg. 8); (6) Setup a clinical administration system where referrals are processed or have a plan how residing in rural/remote areas, and economically disadvantaged populations). This agency &quot;attempts to address cultural barriers by offering culturally-modified, evidence-based trauma treatments, led by bilingual/bicultural clinicians, for Hispanic children and families&quot; (pg. 4). The authors also cite the literature to recommend &quot;clinicians be aware of the family's views of trauma and potential cultural constructs, such as acculturation and ethnic identity, which may impact the treatment process.&quot; (pg. 4).</td>
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<td>McFarlane, Malecha, Gist, Watson, Batten, Hall &amp; Smith</td>
<td>2004</td>
<td>Increasing the safety-promoting behaviors of abused women</td>
<td>RCT</td>
<td>English or Spanish speaking women that qualified for a protection order against a partner. Texas, USA.</td>
<td>Wherever participants could find safe access to a phone</td>
<td>Safety-promoting behaviour checklist provided over the course of 6 phone calls, with follow-up calls at 3, 6, 12, and 18 months post-intervention.</td>
<td>The authors state that the intervention was efficacious in that the number of safety-promoting behaviours in the treatment group was greater than in the control group, an effect which was consistent throughout the duration of the study. The participants in the treatment group also increased the number of safety-promoting behaviors that they performed, and the behaviors remained stable through the study.</td>
<td>The behaviour checklist was provided in both English and Spanish, and African American, Latino, and White participants were fairly evenly represented across both control and treatment groups.</td>
<td>Challenges and barriers were not discussed.</td>
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<tr>
<td>Moeini</td>
<td>2006</td>
<td>Development And Evaluation of aMobile-Based Weighted Wellbeing Scoring Function For Trauma Affected Communities</td>
<td>Dissertation</td>
<td>English-speaking participants residing in Pittsburgh, Pennsylvania, USA</td>
<td>Free Health Center</td>
<td>This is a dissertation with multiple phases and lots of technical steps (app design, development and application). For the purposes of our project, we will extract data related to the Trauma focused intervention delivered through an app. The author tailored and evaluated an app-based trauma-focused intervention specifically for the needs of communities in which trauma and violence.</td>
<td>The author mainly measured the efficacy of the app by testing the usability and user satisfaction, and the participants rated the final product with high satisfaction. The author concludes that &quot;has helped to initiate projects which will help to address the area of TACs with novel implementations of various mobile based tools&quot; (pg. 93).</td>
<td>All participants spoke English; thus language barrier was not addressed. The participants were representative of male and female genders, of various age group (18 - over 55), with various levels of education (GED to PhD). All participants owned a smart phone and 88% use it daily.</td>
<td>Barriers and challenges with implementation were not discussed because this study was only in the prototype phase. It was not implemented in a community or other setting for larger use.</td>
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<td>Moring, Dondanville, Fina, Hassija, Chard, Monson et al.</td>
<td>2020</td>
<td>Cognitive Processing Therapy for Posttraumatic Stress Disorder via Telehealth: Practical Considerations During the COVID-19 Pandemic</td>
<td>Narrative or Literature Review</td>
<td>N/A</td>
<td>N/A</td>
<td>In this paper, the authors specifically discuss the utilization of telehealth in providing therapy. They define telehealth as “behavioral health services that are delivered via communication technologies, such as telephone and clinical video teleconferencing” (pg. 2). The focus of this paper is the use of video conferencing.</td>
<td>The authors indicate that the effectiveness of CPT stays consistent with in-person delivery when it is provided through telehealth. This method was specifically tested for effectiveness and feasibility on DV and sexual assault survivors (n=15) in 2011, results of this uncontrolled RCT indicate that CPT delivered through telehealth was able to reduce symptoms of PTSD and depression in the survivors of DV and SA. The authors conclude &quot;the existing research shows that telehealth can be used effectively to deliver CPT to a diverse range of trauma survivors&quot; (pg. 3). However, for the current Covid-19 context, they provide specific guidelines on how to implement CPT via telehealth. In terms of acceptability, the authors indicate that evidence regarding acceptability of telehealth by clients is limited, however, compared to other modalities of delivering virtual care telephone care seems to be more acceptable.</td>
<td>Equity considerations were not discussed in detail this paper.</td>
<td>Some barriers to implementing telehealth include technological issues such as unstable or unreliable video streaming. Specific to CPT however, the authors highlight &quot;telehealth can create other challenges due to factors that may be apparent during an in-person visit that may be easy to miss in telehealth sessions&quot; (pg. 7).</td>
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## Examining the Use of Virtual Care Interventions to Provide Trauma-Focused Treatment to Domestic Violence and Sexual Assault Populations

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<tr>
<td>Nguyen-Fang, Frazier, Greer, Meredith, Howard &amp; Paulsen</td>
<td>2016</td>
<td>Testing the efficacy of three brief web-based interventions for reducing distress among interpersonal violence survivors</td>
<td>RCT</td>
<td>Undergraduate students with and without a history of IPV at a large Midwestern university, USA</td>
<td>Wherever participants access their personal computers</td>
<td>The authors developed 3 web-based interventions based on the concept of present control (PC) to reduce perceived stress. The original PC intervention was tested previously, and 2 new versions were developed and tested in comparison. The original PC intervention involved educational modules describing areas in which participants do and do not have control. The enhanced PC intervention has the same modules as the original with the addition of systematic and detailed PC exercises. The PC + mindfulness intervention also has the original PC modules plus mindfulness exercises to reduce rumination.</td>
<td>The effect of all 3 interventions on participants with a history of IPV resulted in significant reductions in distress and perceived stress measures. The enhanced PC intervention had the most significant effect on outcome measures for IPV participants. The authors state that although the effect sizes were in the small to medium range, likely due to the number of participants, all 3 interventions have shown to be efficacious in reducing distress, stress, and worry in participants with a history of IPV. This effect weaker for participants without a history of IPV.</td>
<td>The participants were predominantly female (63%) and white (79%).</td>
<td>Challenges and barriers were not discussed.</td>
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<td>Paul, Hassija &amp; Clapp</td>
<td>2012</td>
<td>Technological Advances in the Treatment of Trauma: A Review of Promising Practices</td>
<td>Narrative or Literature Review</td>
<td>N/A</td>
<td>N/A</td>
<td>This paper provides overview of the three most common technologies that are used to provide trauma focused treatments (videoconferencing, e-Health, virtual reality) specifically for PTSD.</td>
<td>(1) Videoconferencing: The authors state, &quot;empirical investigations of videoconferencing have generated initial support for the technology as a feasible and effective means to provide psychological services to diverse client populations&quot; (pg. 899) specific to trauma focused care. These include provision of Telepsychiatry, Individual Psychotherapy and Group-Based Psychotherapy. The authors add, studies indicate that videoconferences are acceptable by clients and have same retention rate as in person treatment. These studies are focused on delivery of videoconferencing in remote</td>
<td>The authors state, &quot;videoconference technology affords not only convenience but also a means to specialized mental health services for underserved and rural populations&quot; (pg. 903). Similarly, they indicate that e-Health services can be used to provide treatment to those who would not otherwise receive it. However, the authors do not consider other vulnerable populations in their discussion. Although these services are possibly accessible to rural communities, they are not taking in to consideration cultural needs, language barrier, affordability and</td>
<td>In terms of videoconferencing challenges were mentioned in regards to the impact of distal services on the therapeutic alliance, confidentiality, and patient safety, thus the authors recommend adherence to ethical guidelines, conducting comprehensive intake procedures to assure appropriateness for treatment, and ensuring patients and providers access to on-site mental health providers and security staff (pg. 903). Additionally, technical issues were mentioned as possible challenges. In the case of e-</td>
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<td>communities. (2) e-Health: the fact that 80% of population in USA have access to Internet and search for health-related information online, the authors assume that e-Health is an effective approach to also delivering trauma-focused treatments for people suffering with PTSD. They add, e-Health interventions have been shown to be effective with respect to symptom reduction in RCTs. (3) Virtual Reality: &quot;appear acceptable to clinicians and patients, and evidence effectiveness in populations that are historically difficult to treat. The existing data are inconclusive as to whether VR-assisted interventions provide additional benefit beyond established exposure-based therapies for PTSD&quot; (pg. 912). Additionally, the authors highlight that virtual realities are supposed to supplement not replace traditional approaches.</td>
<td>access to internet by other underserved communities. The authors also support this concept by indicating, &quot;further empirical evaluations are greatly needed in this area, including the use of broader, more generalizable participant populations&quot; (pg. 907).</td>
<td>Health, &quot;many concerns have arisen about e-Health, including logistical (e.g., attrition, under engagement) and ethical (e.g., health disparities, user-identity assurance, privacy, crisis management) issues&quot; (pg. 907).</td>
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<td>Ragavan &amp; Bair-Merritt</td>
<td>2020</td>
<td>Thrive: A Novel Health Education Mobile Application for Mothers Who Have Experienced Intimate Partner Violence</td>
<td>Evaluation Research</td>
<td>Not discussed</td>
<td>This article describes &quot;the development and formative evaluation of a trauma-informed, user-friendly Smartphone based mobile application (app) to address the unmet health needs and improve the well-being of mothers who have experienced IPV. A multidisciplinary team of IPV experts developed the app (called Thrive) in partnership with software developers. Thrive includes three sections: Myself (maternal self-care, stress coping skills), My Child (stress signs in children, talking to children about IPV, mother-child dyadic communication), and My Life (hospital- and community-based resources)&quot; (pg. 160).</td>
<td>The app was evaluated through feedback from IPV survivors, social workers, IPV advocates, and health care providers. These users reported that the app is user friendly, informative, trauma informed, and a potential alternative to handouts. Based on the initial feedback the authors indicate that the app is acceptable. Some survivors even indicated that the app could have been helpful for when they were in the abusive relationship. The app also includes some safety features such as password protection, quick exit button and the name and design of the app is not indicative of IPV support (disguised well). However, the researchers plan to update the app (Thrive) based on additional user feedback, disseminate it to IPV survivors around the country and evaluate it using a longitudinal outcome evaluation. Thus, they did not provide more detail on its effectiveness and feasibility. The users also recommended that the app &quot;be more interactive, allowing users to create goals, talk with other IPV survivors, and personalize the resource section. Participants also suggested providing multiple options for audio portions, so users can choose a voice they find most calming&quot; (pg 161). This is potentially key information in terms of knowing what IPV survivors need from a virtually provided care.</td>
<td>The app was developed in collaboration with key stakeholders including IPV survivors, these stakeholders requested that the app be &quot;be tailored to the local community, be relevant for a diverse audience, and include multiple media types&quot; (pg. 161) and thus the pilot app was designed per the requests and needs of these stakeholders. However, details of socio-cultural and socioeconomic backgrounds of these stakeholders was not provided.</td>
<td>Challenges and barriers were not discussed.</td>
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<td>Rempel, Donelle, Hall &amp; Rodger</td>
<td>2019</td>
<td>Intimate partner violence: a review of online interventions</td>
<td>Scoping Review</td>
<td></td>
<td>The setting was not specifically discussed, however, given mothers who have access to internet were the participants in the study, it must be a community setting.</td>
<td>Included studies focused on Smart phone App -or computer-based decision support safety aids (please see additional notes for more information on how the authors assessed and reported their findings). Specifically studies used the following forms of intervention: 1. Computerized safety decision aids were described as useful and private by the participants. 2. The online survey does not seem like an intervention because researchers only collected data on frequency of IPV and awareness of victimization or perpetration behaviors. (3) Email between nurses and survivors included concepts of safety, job-, school-, health-, and parenting-related issues, and the authors indicate that such an approach is feasible and acceptable by survivors of IPV. (4) The findings of LEAF (A privacy-conscious social network-based intervention tool for IPV survivors) were not discussed. (5) The internet-based safety planning intervention was considered safe and accessible (74% of participants completed the sessions with &quot;no adverse events&quot; (pg. 7). (6) The app-based safety planning intervention was considered acceptable, and feasible based on participants' feedback. The app app provides personalized information about abusive dating relationships and appropriate resources in a private, safe, and nonjudgmental manner. (7) The evidence-based trauma-focused intervention was considered acceptable, and feasible based on participants' feedback.</td>
<td>The included papers were inclusive of rural residents, and pregnant mothers. However, although this level of assessment may not have been within the scope of this scoping review, the equity considerations in terms of language-barrier, technological access, socioeconomic barrier (unable to afford internet access, phones, computers) and cultural-relevance were not discussed. Also, all the included studies are from high-income countries. That being said, Anderson et al (2019) (study extracted below) reported that 90% of people residing in USA have access to internet. Additionally, the included interventions included only women (excluding other genders).</td>
<td>Challenges and barriers were not discussed.</td>
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<td>Stewart, Orengo-Aguayo, Cohen, Mannarino &amp; de Arellano</td>
<td>2017</td>
<td>A Pilot Study of Trauma-Focused Cognitive–Behavioral Therapy Delivered via Telehealth Technology</td>
<td>Primary Research</td>
<td>Children and youth (7-16 years old) referred to a trauma treatment center in SE USA</td>
<td>Home or local school</td>
<td>Trauma-focused cognitive-behavioral therapy (TF-CBT) was delivered to underserved trauma-exposed youth via telehealth technology (i.e., via one-on-one videoconferencing). This was a pilot test with n=15 participants, however, the preliminary results indicate that participants showed clinically significant reduction in PTSD symptoms and the dropout rate was zero. Therefore, the authors conclude that the delivery of TF-intervention via video conferencing is promising. The videoconferencing software, Vidyo, was used to remotely deliver care in this study.</td>
<td>The participants profile looks like the following: “93.3% female, 46.7% Hispanic, 46.0% African American, and 13.3% Caucasian. Five participants lived in a rural location (distance to clinic 40–110 miles) and 10 participants lived in underserved urban locations. Five youth had an index trauma of sexual abuse, one had an index trauma of physical abuse, three experienced the traumatic loss of a loved one, two witnessed the armed robbery of a family member, one witnessed the physical abuse of a sibling, and three experienced multiple traumas. All children met criteria for PTSD” (pg. 326). Before this study, the participants had barriers in accessing care due to language barrier, lack of transportation, caregiver work schedule and the authors mention some technical challenges with the telehealth equipment (e.g. login problem) and delays due to WIFI problems.</td>
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<td>Stewart, Orengo-Aguayo, Young, Wallace, Cohen, Mannarino &amp; de Arellano</td>
<td>2020</td>
<td>Feasibility and Effectiveness of a Telehealth Service Delivery Model for Treating Childhood Posttraumatic Stress: A Community-Based, Open Pilot Trial of Trauma-Focused Cognitive–Behavioral Therapy</td>
<td>Primary Research</td>
<td>Children and adolescents aged 7 to 18 struggling with PTSD as a result of physical abuse, sexual abuse, witnessing domestic or community violence, violent or unexpected death of a loved one in South Carolina, USA</td>
<td>Medical Center</td>
<td>Telepsychotherapy a type of e mental health or telehealth was delivered to trauma exposed children and youth (n=70).</td>
<td>The authors indicate, &quot;88.6% completed a full course of TF-CBT and 96.8% of these treatment completers no longer met diagnostic criteria for a trauma-related disorder at posttreatment. Results demonstrated clinically meaningful symptom change posttreatment, with large effect sizes evident for both youth and caregiver-reported reduction in posttraumatic stress disorder symptoms. The results observed in this pilot evaluation are promising and provide preliminary evidence of the feasibility and effectiveness of this novel treatment format&quot; (pg. 274-275).</td>
<td>rural settings; these barriers were mitigated by the remote delivery of care. The treatment was provided in two languages: English and Spanish. In addition, the researchers ensured that logistical, perceptual, and cultural barriers including &quot;ethnocultural beliefs and attitudes related to mental health treatment&quot; (pg. 6) were addressed during the interventions.</td>
<td>The intervention was successfully implemented and barriers or challenges were not discussed, however, this is a pilot study with small sample.</td>
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<td>Valentine, Donovan, Broman, Smith, Rauch, &amp; Sexton</td>
<td>2019</td>
<td>Comparing PTSD treatment retention among survivors of military sexual trauma utilizing clinical video technology and in-person approaches</td>
<td>Primary Research</td>
<td>Military Sexual Assault Survivors, USA</td>
<td>Veteran Medical Center and Homes of survivors</td>
<td>Trauma focused Treatment (Prolonged Exposure or Cognitive Processing Therapy) was delivered via clinical video technology to military sexual trauma survivors struggling with PTSD. These survivors were given a choice to enroll in remote delivery (clinical video technology) or in-person therapy. Overall, full completion rate was similar between in-person delivery and video delivery. However, &quot;these results suggest survivors of Military Sexual Trauma were less likely to receive a minimum adequate dose of trauma-focused treatment and that early attrition was particularly salient when care was delivered remotely via Clinical Video Technology&quot; (pg. 5).</td>
<td>The participants were mostly female (74%) and 69% identified as white.</td>
<td>The authors state, &quot;attrition speed was greater for veterans in Clinical Video Technology-delivered treatment, with veterans in this group markedly more likely to attrite quite early in care. The attrition patterns observed tended to coincide with interventions such as early imaginal exposure and written trauma accounts. This is an unfortunate time for patients to dropout, as they may be experiencing temporary symptom exacerbation, which may reduce their likelihood of reengaging in treatment in the future and may negatively impact treatment expectancy. It may be helpful for CVT clinicians to assess for motivation to return at the end of each session and have specific discussion about retention throughout the course of treatment&quot; (pg. 7).</td>
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<td>Villegas-Gold</td>
<td>2018</td>
<td>Developing a Prototype of an Internet-based Decision Aid to Assist Student Survivors of Sexual Assault at Colleges and Universities with Making Informed Choices about Seeking Care and Pursuing Justice in Real-time</td>
<td>Primary Research</td>
<td>Sexual Assault Survivors (students) at Arizona State University, USA</td>
<td>Arizona State University</td>
<td>This is a PhD dissertation where the researcher developed and designed a prototype of an internet-based, trauma-informed decision aid specifically tailored to assist students at Arizona State University who experience sexual. The virtual decision aid supports survivors with making informed choices about reporting and seeking care, advocacy, and support on and off campus. Based on the preliminary results of the pilot test the authors conclude, &quot;1. It is feasible to adapt decision aids for use with the target population, and 2. While aspects of the tool can be improved during the next phases of redrafting and redesign, members of the target population find it to be acceptable, comprehensible, and usable&quot; (pg. 3).</td>
<td>The participants were female University students, and the researcher developed the project with feminist approach in mind. However, additional considerations regarding equity were not discussed.</td>
<td>Given this was a prototype test, the authors indicate that &quot;survivors' voices may have been underrepresented due to sampling issues&quot; (pg. 127). Also, it is difficult to comment on implementation challenges because this prototype was not implemented for larger use.</td>
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<td>Warshaw, Sullivan &amp; Rivera</td>
<td>2013</td>
<td>A Systematic Review of Trauma-Focused Interventions for Domestic Violence Survivors</td>
<td>Systematic Review</td>
<td>Diverse groups in USA (African American, White, Latina, Asian)</td>
<td>Different settings (shelter, community, Primary care).</td>
<td>No, however, all the interventions discussed in this paper are trauma-based treatments tailored for IPV survivors. These include Cognitive Trauma Therapy for Battered Women (CTT-BW); HOPE: Helping to Overcome PTSD through Empowerment; a trauma focused intervention for abused Korean Women residing in shelters; trauma focused treatment that was tailored specifically for African American women, Latina women, suicidal women, and low-income pregnant mothers. Some of these were also culturally tailored for the women.</td>
<td>The results show that each intervention has a positive outcome in terms of lowering signs of PTSD and depression. However, authors of this systematic review indicate that these findings should be interpreted with caution because there were methodological limitations in the included studies (small participant number, higher dropout rates) and the intervention delivery also varied from one study to another (e.g. some were group based, some were individual based). The studies that tailored the intervention to specific cultural groups had higher attrition rate, but the authors again caution in interpretation of this data by point out that other factors such as homelessness or other factors could have been confounders to attrition rates. Therefore, all around the authors recommend caution be taken when discussing effectiveness of the intervention. Feasibility and acceptability are not discussed but this review did not discuss remotely (virtually) delivered interventions.</td>
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<td>Equitity considerations are at the center of this review. Studies included were inclusive of various underserved population in USA (African American, Asian, Latina, low-income, suicidal, drug addicted). However, the authors note the following: “While a number of the interventions reviewed in this paper included diverse groups of participants and culturally tailored interventions, approaches to trauma recovery that are based on the values and healing traditions of particular communities that not only may be more relevant for those communities but which offer approaches that touch on domains affected by trauma not addressed by existing evidence-based practices.” (pg. 16)</td>
<td>Not applicable, because this study is not focused on virtual care delivery.</td>
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