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SELECT GENDER-BASED VIOLENCE LITERATURE REVIEWS

THE IMPACT OF INFORMATION COMMUNICATION TECHNOLOGIES ON GENDER-BASED VIOLENCE

Prepared under Contract No.: GS-I0F-0033M / 7200AA18M00016, Tasking N008

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(MAY 2020)

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ACRONYMS

Apps	Applications
DRG-LER	Democracy, Human Rights, and Governance Learning, Evaluation, and Research Activity
GBV	Gender-Based Violence
ICTs	Information Communications Technologies
IPS	Intimate Partner Surveillance
IPV	Intimate Partner Violence
LMICs	Low- and Middle-Income Countries
NGO	Non-Governmental Organization
Non-IPV	Non-Intimate Partner Violence
SDGs	Sustainable Development Goals
SMS	Short Message Service
SSA	Sub-Saharan Africa
TFSV	Technology-Facilitated Sexual Violence
UN	United Nations
US	United States
USAID	United States Agency for International Development

EXECUTIVE SUMMARY

This United States Agency for International Development (USAID)-supported literature review contributes to agency efforts to better understand gender-based violence (GBV) and its impact on the empowerment of girls and women. To more fully understand the universe of political, social, historic, and economic variables that influence the emergence and prevalence of GBV, this literature review, conducted using the Democracy, Human Rights, and Governance Learning, Evaluation, and Research II mechanism (DRG-LER II), addresses research questions focused on the relationships between GBV and information communication technologies (ICTs). The review aims to summarize and present current knowledge from peer-reviewed publications and the gray literature on the following two questions:

- 1) What is the impact of ICT ownership, access, and usage on GBV?
- 2) What is the relationship between online harassment of women and girls and offline sexual and physical violence against women and girls?

This landscape literature review casts a large net around work relevant to the topic at hand, including gray literature – reports, working papers, government documents, white papers, and evaluations, in addition to scholarly journals and books. The inclusion of such a wide range of sources is particularly appropriate for understanding the relationship between ICTs and GBV, since anecdotal evidence is reported worldwide, while at the same time there is a lack of rigorous research on this topic. The challenge addressed in this report is to effectively draw on the breadth and depth of the existing literature so as to create a coherent picture of the roles of ICTs in online and offline GBV. By setting up basic definitions, it becomes possible to provide some boundaries for what is, or is not, included in this review of the relationships between ICTs and GBV.

KEY FINDINGS

Evidence confirms that ICT plays a role in online and offline incidences of GBV. The literature review identified several pathways between ICT ownership, access, and usage and both online and offline harassment and GBV. The literature demonstrates that 1) ICTs may directly facilitate offline GBV; 2) offline GBV may be perpetrated to gain access to ICTs for online GBV; and 3) online harassment may incite offline GBV.

The types of harassment experienced online often follow patterns of offline abuse. These include insults, unsolicited sexual advances, surveillance, and threats of physical harm. Online abuse is categorically gendered, as feminine usernames are more likely to receive sexually explicit or threatening messages.

Interventions on online GBV should include education and awareness. Civil society interventions may include working across service providers to strengthen support networks for victims. Advocacy may shed light on the impact of ICT-facilitated GBV in the online and offline lives of survivors, and foster culture changes towards rejecting GBV activities. Web-based interventions may include anti-spyware tools and design that supports victim control of devices and accounts.

Globally, legal systems are not equipped to respond to cases in which ICTs facilitate GBV. Because online harassment is not broadly criminalized, it is often inadequately investigated. At the country-level, legislation related to violence against women must be updated to include digital harms, as well as related offline abuse.

The growth of ICT-based interventions for GBV has far outpaced the evidence base in all global settings. Inadequate formative research and monitoring and evaluation – particularly in LMICs – limits evidence-based uptake of the myriad of interventions. This gap extends to ICT-based interventions more broadly, which may be developed and evaluated in high income countries and parachuted into other settings without evaluating generalizability.

RECOMMENDATIONS

Technology-facilitated GBV requires cross-sector collaboration in order to design and implement effective practice, policy, and legal responses. Methods for measuring ICT-facilitated GBV are also necessary for evaluating the efficacy of interventions. Several recommendations emerge for addressing ICT-facilitated GBV within civil society, technological reforms, law reforms, and research.

Civil society:

- Identify cultural and social practices that normalize and/or perpetuate GBV
- Strengthen support for GBV survivors by networking service providers
- Raise awareness about the harms of online and offline GBV

Technology-based interventions

- Incorporate GBV prevention into ICT development
- Design anti-spyware that is effective in identifying dual-use apps
- Adapt online social networks to respond to the dynamics of real-world relationships
- Support the rights of survivors by ensuring data agency, redress, and rectification
- Provide technical support for digital safety training services

Law:

- Introduce legislation to effectively respond to online GBV
- Include online GBV in protection orders for offline abuse
- Develop international legal frameworks to prevent and address online and online-facilitated GBV

Research:

- Address the evidence gap in knowledge of the relationship between ICTs and GBV, particularly at the population level
- Design standards for data collection relevant to ICTs and GBV, including distinguishing online and offline GBV
- Rigorously evaluate interventions for ICT-facilitated GBV

A two-page summary for this Literature Review can be found at:

https://pdf.usaid.gov/pdf_docs/PA00XM4G.pdf.

INTRODUCTION

This United States Agency for International Development (USAID)-supported literature review contributes to agency efforts to better understand gender-based violence (GBV) and its impact on the empowerment of girls and women. To more fully understand the universe of political, social, historic, and economic variables that influence the emergence and prevalence of GBV, this literature review, conducted using the Democracy, Human Rights, and Governance Learning, Evaluation, and Research II mechanism (DRG-LER II), addresses research questions focused on the relationships between GBV and information communication technologies (ICTs). The review aims to summarize and present current knowledge from peer-reviewed publications and the gray literature on the following two questions:

- What is the impact of ICT ownership, access, and usage on GBV?
- What is the relationship between online harassment of women and girls and offline sexual and physical violence against women and girls?

The resulting literature review will help to inform USAID's efforts to identify existing gaps as well as promising practices in addressing ICT-facilitated GBV around the globe.

BACKGROUND

According to USAID, GBV is described as “violence that is directed at an individual based on his or her biological sex, gender identity, or perceived adherence to socially defined norms of masculinity and femininity. It includes physical, sexual, and psychological abuse; threats; coercion; arbitrary deprivation of liberty; and economic deprivation, whether occurring in public or private life. GBV can include female infanticide; child sexual abuse; sex trafficking and forced labor; sexual coercion and abuse; neglect; domestic violence; elder abuse; and harmful traditional practices such as early and forced marriage; ‘honor’ killings; and female genital mutilation/cutting (FGM/C).” Women and girls are most at risk and most affected by GBV (USAID 2013). Consequently, the terms “violence against women” and “gender-based violence” are often used interchangeably. However, boys and men can also experience GBV. GBV can be perpetrated by a variety of actors, including intimate partners (referred to as intimate partner violence [IPV]), family members, and other community members [1, 2]. GBV is associated with long-lasting direct and indirect health consequences, including mental health disorders, injuries, central nervous system symptoms, gastrointestinal symptoms, and suppression of the immune system, and even death,¹ as well as adverse social and economic outcomes. GBV is a common experience for women around the world, with estimates suggesting that one in three women experience some form of physical or sexual GBV in their lifetime, primarily from an intimate partner.² GBV varies regionally – for example, in Sub-Saharan Africa (SSA), the pooled prevalence of IPV exceeds 40 percent.³

The technology revolution has introduced new platforms for the perpetration of GBV.⁴ With the widespread adoption of information communication technologies (ICTs) and the ubiquity of the

¹ Lopez-Neira I, Patel T, Parkin S, Danezis G, Tanczer L. ‘Internet of Things’: How Abuse is Getting Smarter. Rochester, NY: Social Science Research Network; 2019

² World Health Organization. Global and regional estimates of violence against women: prevalence and health effects of intimate partner violence and non-partner sexual violence. WHO; 2013.

³ Muluneh MD, Stulz V, Francis L, Agho K. Gender Based Violence against Women in Sub-Saharan Africa: A Systematic Review and Meta-Analysis of Cross-Sectional Studies. *Int J Environ Res Public Health* 2020; 17: 903. <https://doi.org/10.3390/ijerph17030903>.

⁴ McKay J, James V. The Legal Information Needs of Women Who Experience Online Harassment. *Proc Annu Conf CAIS Actes Congrès Annu ACSI* 2017. <https://doi.org/10.29173/cais1020>.

internet, technology-facilitated abuse has become prevalent. With the proliferation of ‘smart’, internet-connected devices, the number of ICTs that can be used for GBV is increasing.⁵ In this ICT era, new dynamics of online GBV are evolving. Simultaneously, ICTs provide the means for facilitating offline GBV.

Ownership and use of ICTs is expanding most rapidly among women in low- and middle-income countries (LMICs). And yet, as the digital gender divide closes, the digital safety gap widens. Moreover, resources for responding to digital GBV are limited, with most countries lacking the legal and political infrastructure to address this new form of violence.⁶ Thus, responding to the growing concern of ICT-facilitated GBV is a global priority, particularly among governments and non-governmental organizations (NGOs) with the mandate to prevent and respond to GBV.

As the digital divide closes, the digital safety gap widens.

Despite the demand for evidence to inform the development of programming addressing the unique risks and consequences of ICT-facilitated GBV, there is a dearth of research examining the relationship between GBV and ICTs among adults.⁷ This landscape literature review draws on a broad range of sources to synthesize available evidence of the impact of ICT access, ownership, and usage on GBV, with a particular focus on the relationship between online harassment and offline GBV.

This landscape literature review casts a large net around work relevant to the topic at hand, including gray literature – reports, working papers, government documents, white papers, and evaluations, in addition to scholarly journals and books. The inclusion of such a wide range of sources is particularly appropriate for understanding the relationship between ICTs and GBV, since anecdotal evidence is reported worldwide, while at the same time there is a lack of rigorous research on this topic. The challenge addressed in this report is to effectively draw on the breadth and depth of the existing literature so as to create a coherent picture of the roles of ICTs in online and offline GBV. By setting up basic definitions, it becomes possible to provide some boundaries for what is, or is not, included in this review of the relationships between ICTs and GBV.

METHODOLOGY

DEFINITIONS

GENDER-BASED VIOLENCE

The phenomenon of GBV is classified, defined, and measured in diverse ways. Given the breadth of sources included in this literature review, definitions and terminology vary considerably. Broadly, there is consensus that the concept includes any physical, sexual, or emotional abuse perpetrated against an individual based on their gender or gender identity.^{8,9} The boundaries of these categories

⁵ Lopeiz-Neira, I. “Internet of Things”

⁶ ICTworks. Gender-Violence 2.0: The Digital Safety Gap for Women. ICTworks 2015. <https://www.ictworks.org/gender-violence-2-0-the-digital-safety-gap-for-women/>.

⁷ Henry N, Powell A. Technology-Facilitated Sexual Violence: A Literature Review of Empirical Research. *Trauma Violence Abuse* 2018; 19:195–208. <https://doi.org/10.1177/1524838016650189>.

⁸ State Department. United States strategy to prevent and respond to gender-based violence globally. Washington, DC: 2016.

⁹ United Nations. Declaration on the elimination of violence against women. 1993.

are blurred, for example, emotional abuse may include physical destruction of property.¹⁰ Cross-cutting these categories, GBV perpetrated by an intimate partner, operationalized by the United Nations (UN) Sustainable Development Goals (SDGs) as “a current or former partner within the context of marriage, cohabitation or any other formal or informal union” is IPV-perpetrated GBV.¹¹

INFORMATION COMMUNICATION TECHNOLOGIES

The use of ICTs, particularly as “leapfrog” technology to achieve development targets, is increasingly ubiquitous. Access to 21st century ICTs such as computers, the Internet, mobile phones, and tablets is increasing for individuals worldwide, including in LMICs. This literature review includes three broad categories of ICTs: devices, telecommunication and cellular networks, and networking technologies such as the Internet. Of particular relevance to GBV prevention and response, ICTs can also be classified along a spectrum of the victim’s engagement: direct (e.g., messaging), indirect (e.g., public information used by a perpetrator), or no engagement (e.g., spyware).

APPROACH

The purpose of this literature review is to inform the development of future programmatic interventions and strategic efforts focused on preventing and responding to ICT-facilitated GBV by USAID. Additionally, this literature review is intended to provide a discussion of the needs of victims of ICT-facilitated GBV, to identify existing interventions, lessons learned, and persisting knowledge shortcomings and gaps.

The literature review draws on peer-reviewed primary and secondary studies published in academic journals, summary meta-analyses, systematic reviews, other published reports, development program assessments and evaluations, and other relevant literature identified through systematic keyword searches and forward and backward snowballing of key sources conducted across the following databases: Scopus, the largest collection of academic journal articles; the USAID Development Experience Clearinghouse; and the Internet using Google Scholar. Both quantitative and qualitative evidence is included in this review.

Within these searches, a list of key words was used for each thematic area such as: gender-based violence, intimate partner violence, domestic violence, spouse abuse, physical abuse, emotional violence, reproductive coercion, sexual assault; information communication technologies, technology, online harassment, offline harassment, and the Internet. Additional sources were retrieved based on the references in the publications identified in the initial search. The search was limited to English language sources.

INFORMATION COMMUNICATION TECHNOLOGIES AND ONLINE GENDER-BASED VIOLENCE

With the advent of the Internet, the explosion of social media, and ubiquity of digital devices, harassers have entirely new platforms from which to perpetrate abuse.¹² Overwhelming evidence confirms that ICTs play a role in both online and offline GBV. Table I presents examples of terms

¹⁰ Karakurt G, Silver KE. Emotional abuse in intimate relationships: The role of gender and age. *Violence Vict* 2013; 28:804–21.

¹¹ UN Statistics Division. *SDG Indicators Metadata Repository*. New York, NY: 2018.

¹² McKay J, James V. *The Legal Information Needs of Women who Experience Online Harassment*.

associated with ICT-facilitated GBV identified in the literature, categorized across the three common domains of abuse.

Table I. Types of Information Communication Technology-Facilitated Gender-Based Violence

DOMAIN	ABUSE
<i>Emotional</i>	Social, cyber-bullying, threatening, controlling, intimidation, monitoring, harassment, insulting, criticizing, stalking, financial, outing, “doxing”, impersonation, unsolicited sexual advances, verbal or written
<i>Physical</i>	Assault, slapping, hitting, shoving, destruction of property, trafficking, slavery, torture, murder
<i>Sexual</i>	Sexual assault, forced sexual touching, sexual exploitation, sexual trafficking, sexually degrading acts, unsolicited sexual advances, image-based sexual exploitation, forced sexual intercourse, forced prostitution, rape, reproductive coercion

The literature review identified several pathways between ICT ownership, access, and usage and both online and offline harassment and GBV. First, access to a victim’s device(s) or account(s) may enable 1) the appropriation of device(s) or account(s) or 2) the compromising of device(s) or account(s). Abusers may access device(s) or account(s) in the same manner as the victim, by using the victim’s security questions and passwords, with or without the victim’s knowledge. With direct access to device(s) or account(s), perpetrators may leverage information, such as location data, for offline GBV. Second, without direct access to device(s) or account(s), online harassment and GBV may include 1) harmful messages or posts or 2) exposure of (true or fabricated) private information. These forms of online GBV may lead to offline assaults, for example, when posts position the victim as failing to adhere to cultural and legal norms.

Around the world, abusers harness ICTs to facilitate myriad gender-based emotional abuse online GBV. The types of harassment experienced online often follow similar patterns of harassment experienced offline: insults, unsolicited sexual advances, surveillance, sharing private information, and threats of physical harm.¹³ Online abuse is categorically gendered – for example, in one study, researchers set up fake accounts in online chatrooms, finding that feminine usernames were more likely to receive sexually explicit or threatening messages (100 vs. 4 messages per day for feminine and masculine usernames, respectively).¹⁴

It is helpful to further classify online GBV in three ways: 1) as harassment perpetrated by unknown sources, 2) as harassment perpetrated by known contacts, and 3) as harassment perpetrated by intimate partners. The Internet facilitates interactions among a variety of unknown sources, including individuals, organizations and institutions, and anonymous programs – or bots. This anonymity, and even automation of harassment, is a unique feature of online GBV perpetration. In addition to anonymity, the transnational characteristics of the Internet can prevent the categorization of ICT-facilitated GBV by country or administrative region. However, understanding the geographic contours of ICT-facilitated GBV is important for designing prevention and response programming, and several studies have investigated these dynamics in specific country settings. Due to the overall dearth of literature describing the impacts of ICT use, access, and ownership on GBV, evidence

¹³ Citron DK. Law’s expressive value in combatting cyber gender harassment. *Mich Law Rev* 2009; 108.

¹⁴ Lopeiz-Neira, I. “Internet of Things”

presented below is from the United States (US), as well as the focus regions of Asia, Africa, Latin America and the Caribbean, the Middle East, and Eurasia.

In the US, while women and men engage online at similar rates, women and girls disproportionately experience stalking and harassment. Overall, four in ten Americans experience online harassment.¹⁵ The largest survey study of online harassment among women in the US, conducted by the Pew Research Center, found that women are twice as likely as men to report online harassment attributable to their gender. Nearly one-quarter of women report online sexual harassment, and over half of women aged 18 – 29 report receiving an unwanted explicit image.¹⁶ Transwomen and gender minorities are at a particular risk of online emotional GBV in the form of “outing” by abusers, which is exacerbated by “real name” policies.¹⁷

Evidence of ICT-facilitated GBV in LMICs is rapidly emerging. In a multi-country survey of participants across ten LMICs, 13 percent of women and 11 percent of men reported any online abuse.¹⁸ However, this estimate may be lower than the actual prevalence of online abuse due to underreporting. In Kampala, Uganda, 45 percent of female internet users reported experiencing online threats.¹⁹ A large qualitative study of women in South Asia found that the majority of study participants experience online abuse.²⁰ This study identified humiliation as a particularly common form of online abuse with high potential for offline danger, as abusers shared images of women who went against dominant societal values (e.g., wearing modern clothing),²¹ a phenomenon observed around the world.²² In the Caribbean, where rates of GBV are among the highest in the world,²³ two-thirds of Jamaican women reported observing online harassment, while only 20 percent reported experiencing it themselves – suggestive of underreporting.²⁴

To date, the literature describing the effects of ICTs on GBV has focused on adults. And yet, gradients in online GBV across age categories indicate that younger women and girls face a higher rate of abuse. Cyber-bullying is particularly prevalent among young ICT-users, and is a risk factor for offline abuse.²⁵

The dynamics of online GBV also vary by the type of perpetrator. Intimate partner violence advocates and victims have described the online actions of perpetrators as creating a sense of omnipresence, in addition to being isolating, punishing, and humiliating.²⁶ Intimate partners are also

¹⁵ Duggan M. Online harassment. Pew Research; 2017. NW 1615 L. St, Suite 800 Washington, Inquiries D 20036USA202-419-4300 | M-857-8562 | F-419-4372 | M. Online Harassment 2017. Pew Res Cent Internet Sci Tech 2017. <https://www.pewresearch.org/internet/2017/07/11/online-harassment-2017/> (accessed February 23, 2020).

¹⁶ Ibid

¹⁷ Association for Progressive Communications. Providing a gender lens in the digital age: APC Submission to the Office of the High Commissioner for Human Rights' Working Group on Business and Human Rights. 2018.

¹⁸ World Wide Web Foundation. Women's rights online: translating access into empowerment. 2015.

¹⁹ Women's Rights and the Internet in Uganda. Association for Progressive Communications; 2016.

²⁰ Sambasivan N, Batool A, Ahmed N, Matthews T, Thomas K, Gaytán-Lugo LS, et al. “They Don't Leave Us Alone Anywhere We Go”: Gender and Digital Abuse in South Asia. Proc. 2019 CHI Conf. Hum. Factors Comput. Syst., Glasgow, Scotland UK: Association for Computing Machinery; 2019, p. 1–14. <https://doi.org/10.1145/3290605.3300232>.

²¹ Sambasivan N. “They Don't Leave Us Alone Anywhere We Go”

²² Sreberny A. Women's Digital Activism in a Changing Middle East. *Int J Middle East Stud* 2015; 47:357–61. <https://doi.org/10.1017/S0020743815000112>.

²³ UNDP. Caribbean Human Development Report - Multidimensional Progress: Human Resilience Beyond Income. New York, NY: United Nations Development Programme; 2016.

²⁴ Thakur D. How do ICTs mediate gender-based violence in Jamaica? *Gend Dev* 2018; 26:267–82. <https://doi.org/10.1080/13552074.2018.1475044>.

²⁵ Mishna F, Cook C, Gadalla T, Daciuk J, Solomon S. Cyber Bullying Behaviors Among Middle and High School Students. *Am J Orthopsychiatry* 2010; 80:362–74? <https://doi.org/10.1111/j.1939-0025.2010.01040.x>.

²⁶ Woodlock D. The abuse of technology in domestic violence and stalking. *Violence Women* 2017; 23:584–602.

the primary perpetrators of cyberstalking.²⁷ Intimate partners employ ICTs to facilitate stalking, or intimate partner surveillance (IPS).²⁸ Spyware tools used by intimate partner perpetrators include specialized, overt apps as well as “dual apps” – or apps that have a legitimate use but are repurposed for IPS (e.g., anti-theft).²⁹

In summary, online GBV is characterized by a range of abuses, and perpetrated by various actors, including automated abuse. The evidence suggests women around the world experience higher rates of online GBV relative to men, and individuals with non-binary gender identities and sexual minorities are at even more increased risk.

INFORMATION COMMUNICATION TECHNOLOGIES AND OFFLINE GENDER-BASED VIOLENCE

Evidence of the relationship between online and offline GBV facilitated by ICTs exists for several pathways:

- ICTs may directly facilitate offline GBV;
- Offline GBV may be perpetrated to gain access to ICTs for online GBV; and
- Online harassment may incite offline GBV.

Information communication technologies may directly facilitate offline GBV, for example, via location data that is privately or publicly available online at both the individual and aggregate levels, or via dual-use apps or spyware. Such technologies with offline GBV-relevant applications can lead to a sense of inevitability in the victims (e.g., that the abuser knows where to find the victim).³⁰ A qualitative study conducted in India, Pakistan, and Bangladesh found that online GBV was associated with offline physical harm (four percent) from intimate partners, brothers, and uncles.³¹ Case studies of how online GBV is associated with offline GBV in Jamaica include the use of social media to meet victims offline.³² A survey of American women found that five percent of women who used the Internet reported “something happened online” that led them into “physical danger.”³³ Additionally, there is compelling evidence that abusers use the Internet to groom children and young people for sexual exploitation.³⁴

Offline GBV may be perpetrated to gain access to a victim’s device(s) and account(s) to facilitate online abuse. Offline GBV includes interpersonal physical and sexual violence, as well as the destruction of property. For example, a study in Argentina found that a woman’s mobile phone is among the first items to be destroyed by a violent partner.³⁵

The vast majority of examples of ICTs facilitating offline violence are perpetrated by current or former intimate partners. However, cases of non-intimate partner, offline GBV have been reported.

²⁷ Acquardo Maran D, Begotti T. Prevalence of Cyberstalking and Previous Offline Victimization in a Sample of Italian University Students. *Soc Sci* 2019; 8.

²⁸ Woodlock, D. The abuse of technology

²⁹ Chatterjee R, Doerfler P, Orgad H, Havron S, Palmer J, Freed D, et al. The Spyware Used in Intimate Partner Violence. 2018 IEEE Symp. Secur. Priv. SP, 2018, p. 441–58. <https://doi.org/10.1109/SP.2018.00061>.

³⁰ Freed D, Palmer J, Minchala DE, Levy K, Ristenpart T, Dell N. Digital technologies and intimate partner violence: A qualitative analysis with multiple stakeholders. *Proc ACM Hum-Comput Interact* 2017; 1:1–22.

³¹ Sambasivan N. “They Don’t Leave Us Alone Anywhere We Go”

³² Thakur D. How do ICTs mediate gender-based violence in Jamaica

³³ Duggan M. Online harassment

³⁴ Maltzahn K. Digital dangers: information & communication technologies and trafficking in women. *APC Issue Pap Ser* 2006.

³⁵ Association for Progressive Communications. n.d.

For example, in Tanzania, a surveillance squad used social media to track down and arrest people in same-sex relationships.³⁶

Another specific category of offline GBV facilitated by ICTs is trafficking. Traffickers use ICTs in at least three ways: communication within trafficking networks, recruitment of and communication with victims, and advertising and accessing markets for trafficked victims.³⁷

PREVENTING AND RESPONDING TO ICT-FACILITATED GBV

Abusers increasingly exploit technology to harass their victims, urgently requiring innovation in improving digital safety. This section presents current gaps and opportunities for preventing and responding to ICT-facilitated GBV across the following domains: 1) civil society, 2) technology, 3) law, and 4) research.

CIVIL SOCIETY

Online GBV is a manifestation of existing cultural and social paradigms that negatively impact women, girls, and sexual minorities. The interrelated nature of online and offline GBV displays the complex social structures involved in abuse in the ICT era. The perpetration of GBV online is associated with the perpetration of GBV offline, and similarly, victims experiencing GBV online are at risk of experiencing GBV offline. The perpetration of online GBV demonstrates a willingness to engage in violence, and may reflect offline behavior or “gateway” behavior toward offline GBV. Furthermore, ICTs may normalize online and offline GBV. For example, Amnesty International’s research on Internet-based videogames found ubiquitous instances of assault on women and the treatment of women as objects.³⁸ This additional mode of social normalization may increase the risk of GBV at the society level, and should be addressed in prevention programming.

In responding to ICT-facilitated GBV, it is critical to consider the dynamics of the online and offline relationships between perpetrators and victims. Online abusers and victims often share offline social networks, including family members. Additionally, the binary model of contacts available on social networks (e.g., “friend” or not) oversimplifies the dynamic and temporal nature of real-world relationships. Moreover, victims of ICT-facilitated GBV often choose to interact with online social networks as a form of support, conducting risk-benefit analyses about the continued use of ICTs despite the potential for abuse.

Information communication technologies may preserve the connection between perpetrators and victims, adding an additional barrier to the act of leaving and severing ties with the abuser. Victims may also struggle with histories of abuse remaining on ICTs. Thus, given the overlap of online and offline social networks, victims may require autonomous and independent identities on technology platforms. Online and offline privacy management practices should be responsive to the plurality of experiences and backgrounds of victims, including socioeconomic status, familial composition, and immigration status, among others.

Education and awareness have been identified as important forms of intervention in civil society in order to change the attitudes and behaviors driving GBV.³⁹ Civil society interventions may include working across service providers to strengthen support networks for victims. For example, GBV

³⁶ “Anti-gay” force launched in Tanzania. BBC News 2018.

³⁷ Maltzahn K. Digital dangers: information & communication technologies and trafficking in women.

³⁸ Amnesty International. Discriminación y violencia contra las mujeres en los videojuegos más populares de estas navidades. 2004.

³⁹ ICTworks. Gender-Violence 2.0: The Digital Safety Gap for Women.

screening in primary health care settings may incorporate items about online abuse, and include referrals to organizations providing technological protections for individuals at risk of online or online-facilitated GBV. Advocacy may shed light on the impact of ICT-facilitated GBV in the online and offline lives of survivors, and foster culture changes towards rejecting GBV activities.

TECHNOLOGY

Information communication technologies present unique challenges for digital protection against GBV, including digital privacy and security, across a myriad of platforms and devices. Potential applications of ICTs to facilitate or conduct GBV are often overlooked in development stages, despite the growing use of technologies to facilitate GBV (e.g., dual-use apps, spyware apps). Dual-use apps, or apps that can be used for secondary purposes, are commonly used by abusers and are particularly difficult to identify and mitigate. For example, apps used to track the location of children can be leveraged to access texts or record videos. The existing anti-virus and anti-spyware tools fail to identify such dual-use apps as a threat.⁴⁰ Although victims of online GBV have the right to rectify false information about themselves, the opportunity to update erroneous posts does not currently exist across all platforms.

Education about potential risks and harms, including the facilitation of online and offline GBV, is needed for private sector ICT developers. International human rights instruments, including the United Nations Guiding Principles on Business and Human Rights, outline the responsibilities of private and public sector entities in the protection of users, including the obligation to mitigate harm perpetrated on their platforms and devices.⁴¹ To uphold these responsibilities, ICT research and development initiatives should incorporate GBV experiences, concerns, and safety reviews throughout the design phase. Collaborations between private sector ICT companies and institutions with the goal of protecting victims represent one such opportunity.

As technologies continue to advance, interventions targeted at reducing the impact of ICTs on the perpetration of GBV must adapt. For example, blocking programs and privacy controls, such as those designed for children, could be modified for adults. The ability of existing anti-spyware to identify both spyware and dual-use apps should be assessed. Identified inadequacies in existing anti-spyware tools should be addressed, including the development of data management practices that are consistent with privacy and protection rights.

There has been a growing deployment of educational material via ICTs – including web-based interventions – for preventing and responding to GBV. The range of web-based interventions for GBV has included open source mapping of incidents of GBV, mobile device apps, and websites providing information on services for survivors, safety assessment and planning tools, relationship support interventions, and interventions promoting behavior change in potential perpetrators.⁴²

Digital interventions for preventing online harassment and GBV include anti-spyware tools and design that supports victim control of devices and accounts. In a study of GBV among Australian women, an IPV information website did not perform differently than an online interactive tool and safety decision aid designed to increase women's self-efficacy and improve depressive symptoms, although qualitative results indicated that the women in the study found the targeted

⁴⁰ Chatterjee R. The Spyware Used in Intimate Partner Violence.

⁴¹ Suzor N, Dragiewicz M, Harris B, Gillett R, Burgess J, Van Geelen T. Human Rights by Design: The Responsibilities of Social Media Platforms to Address Gender-Based Violence Online. *Policy Internet* 2019; 11:84–103. <https://doi.org/10.1002/poi3.185>.

⁴² Bramon B. Transformative technology: harnessing the power of tech to address gender-based violence in Latin America and the Caribbean. 2017.

recommendations of the online tool more desirable.⁴³ Other online educational materials include digital safety trainings, sometimes tailored to high-risk target populations. For example, a website is dedicated to training female journalists and activists how to respond to gender-based threats online.⁴⁴ However, little evidence of the efficacy exists of such interventions.

Offline, some GBV clinics supplement GBV-reduction services with digital safety training to mitigate further abuse in response to the link between the two programming components. To this end, interventions targeting victims of offline GBV may include a technology component, such as disabling tracking and digital literacy. Another intervention consists of trained technologists who provide face-to-face consultations with survivors to help them navigate possible ICT-facilitated GBV, supported by a set of digital tools that help identify vulnerabilities.⁴⁵ Qualitative research among women in a US pilot study reported that clients found this approach desirable.⁴⁶

To prevent ICT-facilitated GBV, the development of interventions to identify and mitigate adversarial users, authorized and otherwise, is urgently needed. Best practices in the development and evaluation of interventions for ICT-facilitated GBV incorporate skills for online safety and supporting users in protecting their identities.

LAW

Worldwide, law enforcement agencies and legal systems are failing to effectively respond to cases in which ICTs facilitate acts of GBV⁴⁷ because online harassment is not broadly criminalized, and thereby may not be adequately investigated. At the country-level, legislation related to violence against women must be updated to include digital harms, as well as related offline abuse. Avenues for accountability must be developed in parallel to ICT privacy best practices, aligned with international human rights law. Three pressing gaps in legal systems related to technological harassment and GBV should be addressed. First, protective legal orders for victims of GBV may not recognize the role of online GBV in offline abuse (e.g., tracking applications). Second, law should allow for the prosecution of online GBV. Third, federal and international solutions are needed as online GBV crosses administrative boundaries.

While the legal rights of perpetrators and potential victims are often at odds, several countries are notable for their progress in incorporating ICT-facilitated GBV into civil legislative frameworks – South Africa, New Zealand, and Nova Scotia, often in response to high-profile cases of GBV.⁴⁸ In 2009, Citron proposed framing the legal problem of online GBV through the lens of discrimination in employment opportunities, as online harassment may discourage women from online economic activities.⁴⁹ The development of legislative strategies to prevent and prosecute ICT-enabled GBV should include representation and participation from victims and technology leaders alike.

⁴³ Hegarty K, Tarzia L, Valpied J, Murray E, Humphreys C, Taft A, et al. An online healthy relationship tool and safety decision aid for women experiencing intimate partner violence (I-DECIDE): a randomised controlled trial. *Lancet Public Health* 2019; 4:e301–10. [https://doi.org/10.1016/S2468-2667\(19\)30079-9](https://doi.org/10.1016/S2468-2667(19)30079-9).

⁴⁴ IREX. SAFE - Securing Access to Free Expression. n.d.

⁴⁵ Havron S, Freed D, Chatterjee R, McCoy D, Dell N, Ristenpart T. *Clinical Computer Security for Victims of Intimate Partner Violence*, 2019, p. 105–22.

⁴⁶ Freed D, Havron S, Tseng E, Gallardo A, Chatterjee R, Ristenpart T, et al. “Is my phone hacked?” Analyzing Clinical Computer Security Interventions with Survivors of Intimate Partner Violence. *Proc ACM Hum-Comput Interact* 2019; 3:202:1–202:24. <https://doi.org/10.1145/3359304>.

⁴⁷ ICTworks. *Gender-Violence 2.0: The Digital Safety Gap for Women*

⁴⁸ Ibid

⁴⁹ Citron DK. Law’s expressive value in combatting cyber gender harassment

RESEARCH

The growth of ICT-based interventions for GBV has far outpaced the evidence base in all global settings.⁵⁰ Inadequate formative research and monitoring and evaluation – particularly in LMICs – limits evidence-based uptake of the myriad of interventions.⁵¹ This gap extends to ICT-based interventions more broadly, which may be developed and evaluated in high income countries and parachuted into other settings without evaluating generalizability. A first step in building the evidence base around ICT-facilitated GBV is to improve knowledge of their relationships. Currently, data on online GBV and the relationship between online and offline GBV is scarce, and the little data that exists are often of poor quality. The majority of available evidence related to ICT-facilitated GBV is case-based, which allows for the generation of hypotheses about their causal linkages and a deeper understanding of survivor experiences. However, there is inadequate information about trends necessary for the development of interventions for ICT-facilitated GBV. Current global data collection related to GBV does not distinguish between online and offline violence, and represents a readily available opportunity to close this evidence gap. Toolkits including standardized indicators can help to fill this gap by generating standardized resources for gender and ICT programming.⁵²

An overarching criticism of ICT-based interventions is that known, effective interventions work through behavior change methods. It is unclear how online interventions lacking interpersonal relationships, critical for the success of known interventions, could assist victims in overcoming cultural, social, emotional, and economic barriers to leaving abusive relationships.⁵³ Beyond investigating this gap in theory of change, ICT-based interventions should undergo rigorous evaluations using a mix of quantitative and qualitative indicators. Ultimately, a rights-based approach to digital data should guide every stage of intervention research and design in order to realize the rights of individuals experiencing ICT-facilitated harassment and GBV – both on- and offline.

CONCLUSION

The linkages between ICTs and GBV have been documented, although the quality of the evidence is insufficient for identifying trends across geographic and sociocultural settings. This landscape literature review presents the latest evidence on how ICTs are used to facilitate both online and offline GBV, and highlights important gaps in the literature including a dearth of quantitative evidence of the role ICTs play in GBV, and limited research on the efficacy and effectiveness of intervention platforms. Future research should prioritize addressing these gaps in the literature. This review provides recommendations for strategic efforts focused on preventing and responding to ICT-facilitated GBV by addressing these gaps. Findings suggest that multi sector efforts – including actors from civil society, private and public ICT developers, legal systems, and research institutions – are needed to prevent and respond to ICT-facilitated GBV. Below we provide recommendations for addressing ICT-facilitated GBV.

RECOMMENDATIONS

- Technology-facilitated GBV requires cross-sector collaboration in order to design and implement effective practice, policy, and legal responses. While limited evidence suggests that many individuals experience online GBV, and that online GBV may lead to offline GBV, data needed for understanding the etiology of these phenomena are insufficient. Several steps

⁵⁰ Hegarty K. An online healthy relationship tool and safety decision aid for women experiencing intimate partner violence

⁵¹ Jewkes R, Dartnall E. More research is needed on digital technologies in violence against women. *Lancet Public Health* 2019; 4:e270–1. [https://doi.org/10.1016/S2468-2667\(19\)30076-3](https://doi.org/10.1016/S2468-2667(19)30076-3).

⁵² USAID. Gender and information communication technology (ICT) survey toolkit. 2017.

⁵³ Jewkes R, Dartnall E. More research is needed on digital technologies in violence against women.

towards standardizing the measurement of ICT-facilitated GBV are underway, including the development of indicators. Methods for measuring ICT-facilitated GBV are also necessary for evaluating the efficacy of interventions.

- Prevention efforts should begin during the design phase of ICTs, particularly for digital tools that may have dual uses, and should include perspectives of GBV-affected populations. Ongoing assessments of the potential uses of ICTs for abuse are needed in the context of rapidly evolving technologies, and in consideration of the potential to combine technologies for new uses. Private, public, and non-profit actors can work together to mitigate the use of ICTs for perpetrating GBV. Interventions may comprise digital tools, online and offline services, and campaigns to shift social norms related to GBV.
- Recommendations for civil society, technology, law, and research domains in preventing ICT-facilitated GBV are summarized in Table 2 below.

Table 2. Recommendations for ICT-facilitated GBV

DOMAIN	RECOMMENDATIONS
<i>Civil Society</i>	<ul style="list-style-type: none"> • Identify cultural and social practices that normalize and/or perpetuate GBV • Strengthen support for GBV survivors by networking service providers • Raise awareness about the harms of online and offline GBV
<i>Technology</i>	<ul style="list-style-type: none"> • Incorporate GBV prevention into ICT development • Design anti-spyware that is effective in identifying dual-use apps • Adapt online social networks to respond to the dynamics of real-world relationships • Support the rights of survivors by ensuring data agency, redress, and rectification. • Provide technical support for digital safety training services
<i>Law</i>	<ul style="list-style-type: none"> • Introduce legislation to effectively respond to online GBV • Include online GBV in protection orders for offline abuse • Develop international legal frameworks to prevent and address online and online-facilitated GBV
<i>Research</i>	<ul style="list-style-type: none"> • Address the evidence gap in knowledge of the relationship between ICTs and GBV, particularly at the population level • Design standards for data collection relevant to ICTs and GBV, including distinguishing online and offline GBV • Rigorously evaluate interventions for ICT-facilitated GBV

- Further quantitative and qualitative monitoring and evaluation of interventions for ICT-facilitated GBV are needed to understand their causal effects and identify effective practices. Knowledge about intervention efficacy is particularly inadequate in LMICs, and assessments of the external generalizability of intervention efficacy are critical to understanding real-world effectiveness. As technology advances, interventions targeted at reducing the impact of ICTs on online and offline GBV must adapt.

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