The State of Evidence and Data Collection on Technology-facilitated Violence against Women

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INTRODUCTION

A central tension of the digital revolution and the uptake of online information and communications technologies including the Internet (ICTs) is its potential for both positive and negative gendered impacts.[1] Online spaces and digital tools can facilitate access to essential information and services, unleashing educational and employment opportunities for women and girls.[2] Also —and while the gender digital divide prevents vast portions of women and girls from enjoying these potential benefits—for those who are online and do have access, **a growing body of evidence sheds light on the ways in which the digital revolution has exacerbated existing forms of gendered inequalities and oppression, and has even created new ones.**[3]

In an increasingly digitized world, one of the more concerning dynamics is technology-facilitated violence against women (TF VAW).[4] While technology-facilitated violence has an extensive reach, available evidence shows that **women and girls are disproportionately impacted**[5], and identifies subgroups of women that are at heightened risk of offline violence are also at greater risk of online violence, including: young women and girls; women in public life; lesbian, gay, bisexual, transgender, intersex, queer and other (LGBTIQ+) people;[6] racialized, minoritized and migrant groups of women;[7] and women with disabilities. In turn, **TF VAW exacerbates the gender digital divide, undercuts access to information and services, and infringes upon women's rights to participate in public life.**[8] TF VAW amplifies and normalizes existing cultures of patriarchal violence and misogyny, while enabling the emergence of "new" ones.[9]

This brief paper summarizes the scoping review and key recommendations on the approaches to collecting data on TF VAW, the current state of evidence and data and the challenges presented in the paper "Technology-facilitated Violence Against Women: Taking Stock of evidence and data collection" developed by Ladysmith as part of the UN Women-WHO Joint Programme on Violence Against Women Data.
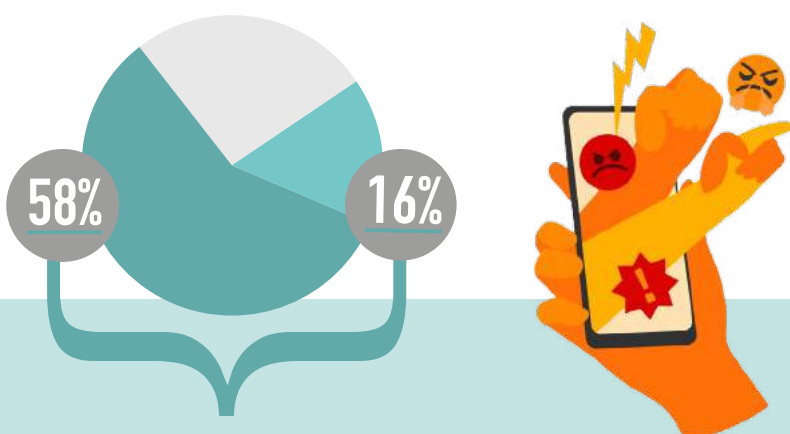
THE RANGE OF ONLINE GENDER-BASED VIOLENCE BASED ON AVAILABLE PREVALENCE DATA[10]

EMERGING CONSENSUS AROUND A DEFINITION OF TECHNOLOGY-FACILITATED VIOLENCE AGAINST WOMEN

Until recently, the international community has lacked a shared definition of TF VAW, which has been one of the foremost challenges to collecting data and producing comparable research on this type of gender-based violence. Recognizing this key barrier, UN Women convened in November 2022 29 diverse stakeholders from 26 inter-governmental organizations, government agencies, civil society, and the academia, including gender policy specialists, researchers, academics and statisticians to develop a shared definition which builds on previous work from academics, governments, national statistical offices (NSOs), feminist movements, international organizations and other gender equality advocates. The expert group defined **technology-facilitated violence against women as any act, that is committed, assisted, aggravated or amplified by the use of ICTs or other digital tools, that results in or is likely to result in physical, sexual, psychological, social, political or economic harm, or other infringements of rights and freedoms.**[11]

APPROACHES TO COLLECTING DATA ON TECHNOLOGY–FACILITATED VIOLENCE AGAINST WOMEN

Understanding *how* data is generated is key for understanding the *drivers* of data gaps, and thus informing targeted investments to strengthen a more action-oriented, global evidence base on TF VAW.

SURVEY DATA

SPECIALIZED VAW STUDIES: State-produced data collected via **household surveys** conducted by women interviewers highly trained in **survivor-centered approaches for research** on VAW. Critical for monitoring progress on ending VAW. Recent specialized VAW surveys are beginning to feature questions related to TF VAW, but due to the lack of space in questionnaires, they have only included questions on **the use of ICTs to control, stalk, or sexually harass.**[12]

Example: the Uganda Violence Against Women and Girls Survey 2020 conducted by the Uganda Bureau of Statistics provided an intersectional analysis of experiences of cyber harassment by geographies, age and income status.

SPECIALIZED ICT STUDIES: State-produced population-based surveys on the use and impact of different ICTs and digital tools. These dedicated surveys to ICTs can include full sections on violence.

Example: In Mexico, the National Survey on Availability and Use of Information Technologies in Homes conducted by the National Institute on Statistics and Geography includes a module on cyber harassment which in 2021 asked all respondents aged 12 and above about 13 different "situations" of violence, with data disaggregated by sex, age and education level.

SPECIALIZED TF VAW SURVEYS: non-State **surveys** on TF VAW of a more **experimental and specialized nature, mainly conducted online.** Highly useful (provided the methodological, ethical and safety considerations are addressed) for informing the development of data-collection instruments, filling data gaps in official statistics and elucidating the scope of TF VAW.

Example: In 2021, UN Women surveyed 11,497 respondents, including 4,187 women, across eight countries in the Arab States region, through a web-based survey on online violence against women.

NON-REPRESENTATIVE SURVEY DATA: TF VAW surveys mainly conducted **online**, their **nimble nature** makes them highly valuable (provided the methodological, ethical and safety considerations are addressed) for advocacy and program design. Such studies' more experimental nature also allows for **broader conceptualizations of TF VAW**, or the inclusion of new and more context-specific forms of TF VAW, and may be better suited to capture the experiences of more diverse groups of women and girls.

Example: The Glitch UK and the End Violence Against Women Coalition research on Covid-19 and the epidemic of online abuse featured a more inclusive definition of online abuse, giving survey respondents the option to select from 28 types of behaviors.

QUANTITATIVE ADMINISTRATIVE DATA

SERVICE DATA: data from government and civil society services can provide useful insights such as how reporting trends change overtime, quality of services and estimated costs of service-provision

Example: the national police of Morocco reported for the first time in 2020 that at least 1 per cent of reported VAW cases had been "committed by the means of modern technology," and this increased to 2 per cent in 2021.

TRANSPARENCY REPORTS FROM TECHNOLOGY COMPANIES: available data on technology-facilitated violence is limited, particularly on TF VAW. Information is lacking on perpetrators and targets' age, gender and other key socio-demographic factors, and on the geographic context or scope of reported incidents.

QUALITATIVE DATA

'TRADITIONAL' QUALITATIVE RESEARCH: Key informant interviews and focus group discussions with survivors, service-providers, policymakers and others are critical sources of data. Data collectors have the **opportunity to explain TF VAW**, thus overcoming the barrier of a lack of a shared and well-known definition. It can provide a deeper understanding of the complex drivers and forms of TF VAW and can reach marginalized groups that may otherwise be left out of surveys. More exploratory research methods are essential for **understanding constantly evolving and emerging forms of TF VAW**, and identifying ways of including them in quantitative studies. These methods are also important for **awareness-raising** among research participants.

Example: Messing et al.'s interviews with residents of a women's shelter helped illustrate how technologies are interwoven throughout women's experiences of stalking and abuse, making the distinction between 'offline' and 'online' violence blurry – especially given women's need to continue using digital technologies for their livelihoods and, indeed, to escape situations of violence.

DIGITAL ETHNOGRAPHIES: innovative qualitative research methods that are uniquely fit for studying TF VAW.

Example: Henry and Flynn's 2020 study of 77 sites that host image-based sexual abuse material provided unique insights around the motivations and practices of perpetrators of TF VAW, and the ways in which online environments exacerbate risks of violence.

MIXED METHODS

SOCIAL MEDIA DATA: mixed **qualitative and quantitative methods** to collect and analyze social media data, or "Big Data". Ensuring that ethical standards of anonymity and confidentiality are strictly met, this data can be particularly useful for studying forms of TF VAW that occur via social networking sites, including **online harassment** and **gendered hate speech**. Given the speed at which hateful, online content is created and shared, Artificial Intelligence (AI)-based methods for detecting TF VAW are important and necessary, but the use of AI as a primary or exclusive means for moderating online content has important limitations.

Example: Research by Blake et al. used three types of data in their study: population-based survey data, administrative data and social media data to investigate the relationship between hate speech and incidents of domestic and family violence. In triangulating the data sets, a key finding surfaced for advocates and policymakers: misogynistic tweets are directly correlated with increased incidents of violence across 47 US states.

IWD2016 - India - New Delhi © UN Women/ Deepak Malik

CURRENT STATE OF EVIDENCE AND DATA

Forms of TF VAW

From the few studies that compare different forms of TF VAW, an overarching finding is that **sexual harassment** and **stalking** are more commonly reported forms of technology-facilitated violence,[13] often perpetrated via **image-based abuse**[14] and **unwanted messages, posts and phone calls.**[15]

Contexts of TF VAW

Of the few studies that compare the contexts in which TF VAW takes place, they often find that women were more likely to report experiencing violence on **social networking sites,** compared to other digital contexts (such as personal online accounts, GPS-based technologies, or dating and entertainment sites).[16] While several social media platforms were mentioned (including Twitter, WhatsApp, Instagram and Reddit), Facebook (by Meta) was consistently identified as the most common site of TF VAW.[17]

Risk factors of TF VAW

Studies that include both men and women illustrate that: violence in digital contexts affects everyone[18] but **women are more likely to experience more severe forms** of technology-facilitated violence (such as sexual harassment and stalking) compared to men,[19] and that women and non-binary individuals who report online violence are often targeted **because of their sex and gender identity**.[20] Studies also found that young women and girls;[21] women in public life;[22] lesbian, gay, bisexual, transgender, intersex, queer and other (LGBTIQ+) people;[23] racialized, minoritized and migrant groups of women;[24] and women with disabilities are at heightened risk of technology-facilitated violence due to **intersecting forms of discrimination**, which are at times exacerbated by certain digital-specific risk factors.[25]

Impacts of TF VAW:

Studies have used a range of qualitative and quantitative research methods to detect the gendered impacts of TFVAW, which have been found to:

1. **Promote cultures of violence**, including the normalization of misogyny and VAW, particularly among social networking platforms.[26]

2. Be **as severe as offline VAW**.[27]

3. Be often **connected to offline acts of physical, sexual and emotional violence**, as part of the continuum of violence.[28]

4. Contribute to **the gender digital divide,** as women change the way they interact with technologies due to direct and indirect experiences of, or concerns around, TFAW.[29]

5. Worsen **women's economic exclusion**, given the growing role of digital tools and technologies in the modern economy.[30]

6. Stifle women's voices and **infringes upon women's rights to political participation**.[31] Research has shown how women in politics and women journalists are particularly targeted, and how experiences of TF VAW are driving them out of these professions.[32]

CHALLENGES

🎯 METHODOLOGICAL CHALLENGES

1. **Lack of a shared operational definition and methodology for monitoring, measuring and analyzing TF VAW,** including a common umbrella term and a shared vocabulary of its forms and modes.

2. **Lack of shared indicators identifying the data points that are most actionable and of greatest priority for generating knowledge and action and of shared variables for intersectional analysis.**

3. **Limitations of social media data** Given the speed and breadth of online interactions, AI-based research methods are needed to investigate TF VAW but they have important limitations such as bias in assumptions and data sets.

🎯 ETHICAL CHALLENGES

4. **Ethical and safety protocols, including survivor-centered training of interviewers.** Specialized ICT surveys and other non-VAW surveys are important methods to address data gaps, but it is critical that methodologies uphold international standards around survivor-centered research— as well as specific VAW research standards, especially with regards to ethical and safety protocols and dedicated training of interviewers.

5. **Privacy and data protection.** While calling for more data to fill gaps, including through exploring innovative methods and transparency data from technology companies, significant caution must be taken to ensure data-sharing never violates individuals' privacy or creates additional risks of harm.

6. **Lack of response services**. Following guidance on researching VAW, data should not be collected from survivors of TF VAW without ensuring full privacy and access to necessary support services or protection mechanisms (e.g., effective restraining orders against cyberstalkers).

🎯 SOCIOPOLITICAL CHALLENGES

7. **Lack of overall problematization and awareness around TF VAW.** Due *in part* to a lack of data and dissemination of data findings, there is a lack of awareness around TF VAW—which can in turn stymie prevention and response policies, programmes and services, thus further impeding data collection efforts. The lack of awareness around TF VAW can also be traced to an absence of political will among those with decision-making power, who may cite insufficient "proof" of a problem as a rationale for low investment or delayed action.

8. **Outdated legal frameworks, training and protection.** Laws and regulations continue to lag significantly behind technological innovation, resulting in inadequate technology companies' policies, and outdated training for service-providers that can lead to misidentification of incidents, and consequently, flawed administrative data sets and an inadequate response (or a lack of response entirely).

9. **Need for significant multi-stakeholder partnership and coordination.** Given the unique role of global technology companies in spaces where TF VAW takes place, the ubiquitous nature of ICTs, and the rapid and potentially cross-border impacts of TF VAW, multistakeholder efforts are required to fill the data gaps.

10. **The limited data that exist are often biased towards the Global North.** Like all forms of VAW, TF VAW and its differentiated impacts may vary across diverse contexts. Yet, identification and measurement tools developed in high-income countries have often been parachuted into other settings, without being properly adapted.

Awareness-raising messages against violence against women displayed on Ecobank's ATM in Mozambique, 2022. ©UN Women/Celma Costa

KEY RECOMMENDATIONS

Develop standardized methodologies for data collection, analysis and use

a. Consider a **diversity of methodologies**, given the important role of different data sources (including but not limited to different types of surveys, programmatic and administrative data, qualitative data, and mixed methods).

b. Provide **clear definitions** of forms (e.g., sexual harassment or stalking), tactics (e.g. image-based abuse or unwanted messages), and contexts (e.g., social networking sites or dating and entertainment sites) of technology-facilitated violence against women.

c. Develop standards addressing **disaggregation by age and sex** at a minimum and, ideally, by sexual orientation, gender identity, race, ethnicity, rural/urban status and dis/ability, among other socio-demographic factors, including those most relevant to local contexts, to enable intersectional analysis. Multiple and granular disaggregation should only be conducted when the privacy and safety of individuals is ensured.

d. **Consult with civil society organizations (CSOs), feminist movements and other gender equality advocates**—to regularly revisit and refine the methodologies, to respond to the priorities and perspectives of survivors, and to identify new forms, tactics, and contexts of TF VAW as they emerge.

e. Invite **technology companies to participate** in the development of these standards, to collect their insights around privacy rights and other technological considerations.

f. Ensure **relevant and globally applicable standards** to enable evidence generation on TF VAW from low- and middle-income countries. This may require knowledge sharing on how to customize studies based on local contexts.

Investments

a. Invest in **qualitative research**, which is key for identifying new and emerging forms of violence, and thus informing the development of quantitative survey instruments.

b. Invest in **independent studies and citizen-generated** data, particularly by CSOs, to capture diverse forms of TF VAW, and to reach diverse groups who may otherwise be underrepresented in data.

c. Provide training to governments, CSOs, data producers and researchers to address existing data gaps and inform context-specific and evidence-driven prevention and response programmes for TFVAW.

Legislation and norms

a. Develop or **extend legal definitions of and policies on VAW** to include TF VAW. Doing so contribute to setting a clear norm that these forms of violence are a violation of women's and girls' rights and will not be tolerated, and it will also help catalyze further action to build a shared understanding of what TF VAW is to inform data collection that is comparable across sectors.

b. Develop legislation requiring **technology companies, provided ethical safeguards are in place, to share a common set of metrics**, including forms of TF VAW disaggregated minimally by age, sex, and geographic contexts, acknowledging that individuals and cases should not be identified for privacy and safety reasons.

c. Aligned with international standards, **include a comprehensive set of technologies in legal definitions of TF VAW, including** any digital tools that may assist, aggravate or amplify VAW, rather than only including online platforms or social networking sites.

Moving forward: Future research

a. Analyze how digital technologies and tools contribute to **specific forms of VAW**, like human trafficking and religious and political extremism, to complement growing evidence on technology-facilitated sexual harassment, stalking and hate speech.

b. Generate evidence on **more diverse tactics** of TF VAW, including Zoom-bombing, trolling, doxing, impersonation, hacking and misinformation.

c. Research on **different contexts** to produce evidence beyond social networking sites, including GPS technologies, drones and other "smart technologies", as well as dating, gaming and entertainment sites.

CSW67 – Side Event - Open, Safe and Equal – Shaping a Feminist Digital Future. ©UN Women/Ryan Brown

ENDNOTES

1   O'Donnell and Sweetman 2018.

2   Zulver et al. 2021; Handapangoda and Kumara 2017; Zelezny-Green 2018.

3   O'Donnell and Sweetman 2018.

4   Acknowledging that technology-facilitated violence disproportionately impacts women in all their diversity and gender non-conforming individuals, the proposed terminology and definition maintain the language of VAW rather than GBV for considerations related to measurement purposes, aligning with the Sustainable Development Goals and existing survey tools and methodologies.

5   Medeiros de Araújo et al. 2022; Cotter and Savage 2019; Buchanan et al. 2021.

6   Powell 2018; Ouerghi et al. 2020; Sambasivan et al. 2019; Cotter and Savage 2019; Pew Research Center 2021.

7   Vidgen, B., H. Margetts, and A. Harris. 2019. "How Much Online Abuse Is There? A Systematic Review of Evidence for the UK." London: The Alan Turing Institute; Iyer et al. 2020; Gallego et al. 2017; Glitch UK & EVAW Coalition 2021; Pew Research Center 2021.

8   Noting the scope of these and other harms being enacted through online and ICT-facilitated violence, the report by the Special Rapporteur on violence against women and girls, its causes and consequences, emphasizes that women's rights to live a life free from violence, to freedom of expression, to privacy, to have access to information shared through ICTs, should also be protected in digital contexts, "including through the prohibition of gender-based violence in its ICT-facilitated and online forms." United Nations Special Rapporteur on violence against women, its causes and consequences. 2018. Report of the Special Rapporteur on violence against women, its causes and consequences on online violence against women and girls from a human rights perspective (A/HRC/38/47), pp. 5–6.

9   UNESCO and UN Women 2019; O'Donnell and Sweetman 2018; Spuy and Aavarti 2017, p. 78.

10   Hicks 2021

11   It was noted that, in the proposed definition, violence against women can be substituted with gender-based violence, whilst maintaining the common definition describing the phenomenon. https://www.unwomen.org/en/digital-library/publications/2023/03/expert-group-meeting-report-technology-facilitated-violence-against-women

12   EU FRA 2014, GEOSTAT 2017, HCP 2019, INSTAT 2019, INEGI 2021, UBOS 2021.

13   Malanga 2021; Economist Intelligence Unit 2021; UN Women 2020a.

14   Hassan et al. 2020; UN Women 2022a; Glitch UK & EVAW Coalition 2020.

15   INSTAT 2019; Cotter and Savage 2019.

16   Hassan et al. 2020; Iyer et al. 2020; UN Women 2022a; Glitch UK & EVAW Coalition 2020; UBOS 2021.

17   Iyer et al. 2020; Posetti et al. 2020; UN Women 2022a; Hicks 2021.

18   Buchanan et al. 2021; Pew Research Center 2021; Powell et al. 2018; Cotter and Savage 2019.

19   Pew Research Center 2021.

20   Ouerghi et al. 2020; Mondal et al. 2017; Pew Research Center 2021; Iyer et al. 2020.

21   Sambasivan et al. 2019; Pew Research Center 2021; Economist Intelligence Unit 2021; Babvey et al. 2021; UN Women 2020b; UBOS 2021; FRA 2014; Cotter and Savage 2019.

22   Kumar et al. 2021; Zagloul et al. 2022; UN Women 2020a; UN Women 2022; Posetti et al. 2020; Rego 2018.

23   Powell 2018; Ouerghi et al. 2020; Sambasivan et al. 2019; Cotter and Savage 2019; Pew Research Center 2021.

24   Vidgen 2019; Iyer et al. 2020; Gallego et al. 2017; Glitch UK & EVAW Coalition 2021; Pew Research Center 2021.

25   Ibid.

26   Powell 2018; Vidgen 2019; Iyer et al. 2020.

27   Powell 2018; Sambasivan et al. 2019; Crooks 2017; Medeiros de Araújo et al. 2022; Messing et al. 2020; Iyer et al. 2020; Patel and Roesch 2022.

28   Sambasivan et al. 2019; Reed et al. 2018; Blake et al. 2021.

29   Sambasivan et al. 2019.

30   World Bank 2022.

31   Kumar et al. 2021; Faith and Fraser 2019; HRC 2018.

32   UN Women 2022a.