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Measuring violence against women

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

Note by the United Nations Entity for Gender Equality and the Empowerment of Women*

Abstract

Online spaces and technology are important for women and girls in enabling connection, networks and access to information and services to grow creativity, prosperity, and leadership. However, the growing access, use, and reliance on Information and Communication Technologies (ICTs) has created a context conducive to increased violence against women (VAW) in digital contexts and offline. Evidence shows that technology-facilitated violence against women (TF VAW) is a pervasive problem with disproportionate risks for some groups including young women and girls, women in politics, women journalists and women activists. However, the absence of agreed definitions and methodologies for measurement coupled with underreporting are a challenge for understanding the true prevalence of technology-facilitated violence against women. Global coordinated efforts to fill these gaps were called for in March 2023 by the UN Statistical Commission at its 54th session and by the Commission on the Status of Women at its 67th session.

To fill this gap, UN Women has initiated global consultations that have resulted in a common definition for data and measurement. The proposed definition builds on existing work conducted to measure and research technology-facilitated violence against women, through diverse methods and types of data, including national prevalence surveys, ICT surveys, and other survey, administrative and qualitative data. These initiatives were analysed in a scoping review on the state of evidence and

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data collection on technology-facilitated violence against women, with the objective to inform the current development of globally agreed methodologies.

I. Introduction

1. 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
2. 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 impacted⁵, 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+)

¹ O'Donnell, A., and C. Sweetman. 2018. "Introduction: Gender, development and ICTs." *Gender & Development* 26 (2), pp. 217–229.

² Zulver, J., T.P. Cookson, and L. Fuentes. 2021. "COVID-19 and gender-based violence: reflections from a 'data for development' project on the Colombia–Venezuela border." *International Feminist Journal of Politics*; Handapangoda, W. and A. Kumara. 2017. "The World at Her Fingertips?: Examining the Empowerment Potential of Mobile Phones among Poor Housewives in Sri Lanka." *Gender, Technology and Development* 17 (3), pp. 361–385; Zelezny-Green, R. 2018. "'Now I want to use it to learn more': using mobile phones to further the educational rights of the girl child in Kenya." *Gender & Development* 26 (2), pp. 299–311.

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 maintains the language of violence against women rather than gender-based violence for considerations related to measurement purposes, aligning with the Sustainable Development Goals and existing survey tools and methodologies.

⁵ Medeiros de Araújo, A., C. Vieira do Bonfim, M. Bushatsky, and B. Alencar Furtado. 2022. "Technology Facilitated Sexual Violence: A Review of Virtual Violence against Women." *Research, Society and Development* 11 (2), p. e57811225757; Cotter, A., and L. Savage. 2019. "Gender-Based Violence and Unwanted Sexual Behaviour in Canada 2018: Initial Findings from the Survey of Safety in Public and Private Spaces." Ottawa: Statistics Canada; Buchanan, N., and A. Mahoney. 2021. "Development of a Scale Measuring Online Sexual Harassment: Examining Gender Differences and the Emotional Impact of Sexual Harassment Victimization Online." *Legal and Criminological Psychology* 27 (1), pp. 63–81.

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people;⁶ racialized, minoritized and migrant groups of women;⁷ and women with disabilities. In turn, technology-facilitated violence against women exacerbates the gender digital divide, undercuts access to information and services, and infringes upon women's rights to participate in public life.⁸ Technology-facilitated violence against women amplifies and normalizes existing cultures of patriarchal violence and misogyny, while enabling the emergence of "new" ones.⁹

3. This paper summarizes the scoping review and key recommendations on the approaches to collecting data on technology-facilitated violence against women, 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 Global Joint Programme on Violence Against Women Data.

A. Emerging consensus around a definition of technology-facilitated violence against women

4. Until recently, the international community has lacked a shared definition of technology-facilitated violence against women, 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, which is committed, assisted, aggravated or

⁶ Powell, A., Scott, A.J., Flynn, A., and Henry, N. 2018. Image-based sexual abuse: An international study of victims and perpetrators; Ouerghi, A.D. 2020. Study on cyber-violence against LGBTIQ++ Individuals; Sambasivan, N., A. Batool, N. Ahmed, T. Matthews, K. Thomas, L.S. Gaytán-Lugo, D. Never, E. Bursztein, E. Churchill, S. Consolvo. 2019. "They Don't Leave Us Alone Anywhere We Go": Gender and Digital Abuse in South Asia." Conference on Human Factors in Computing Systems - Proceedings, pp. 1–14; Cotter and Savage 2019; Pew Research Center. 2021. The State of Online Harassment

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, N., B. Nyamwire, and S. Nabulega. 2020. "Alternate Realities, Alternate Internets: Feminist Research for a Feminist Internet." Pollicy, citing Zweig et al. 2013; Gallego Durán, M., E. Gualda, and C. Rebollo Díaz. 2017. "Women and Refugees in Twitter: Rethorics of Abuse, Vulnerability and Violence from a Gender Perspective." *Journal of Mediterranean Knowledge* 2 (1), pp. 37–58; Glitch UK and the End Violence Against Women Coalition (EVAW Coalition). 2020. "The Ripple: COVID-19 and the Epidemic of Online Abuse."; 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. The big conversation: Handbook to address violence against women in and through the media; O'Donnell and Sweetman 2018; Spuy, A. and N. Aavriti. 2018. "Mapping Research in Gender & Digital Technology." Ottawa: IDRC, p. 78.

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amplified by the use of ICTs or other digital tools, which results in or is likely to result in physical, sexual, psychological, social, political or economic harm, or other infringements of rights and freedoms.¹⁰

II. Approaches to collecting data on technology-facilitated violence against women

5. 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 technology-facilitated violence against women.

A. Survey data

6. Specialized violence against women studies: State-produced data collected via household surveys conducted by women interviewers highly trained in survivor-centred approaches for research on VAW. Critical for monitoring progress on ending violence against women. Recent specialized violence against women surveys are beginning to feature questions related to technology-facilitated violence against women, but due to the lack of space in and length of questionnaires, they have only included questions on the use of ICTs to control, stalk, or sexually harass.¹¹ Example: the Uganda Violence Against Women and Girls Survey 2021 conducted by the Uganda Bureau of Statistics¹² provided an intersectional analysis of experiences of cyber harassment by geographies, age and income status.
7. 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 Geography¹³ 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.
8. Specialized technology-facilitated violence against women surveys: non-State surveys on technology-facilitated violence against women 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

¹⁰ 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. UN Women and the World Health Organization. 2022. Technology-facilitated violence against women: towards a common definition. Report of the meeting of the expert group. 15-16 November 2022. New York, USA.

¹¹ EU FRA (European Union Agency for Fundamental Rights). 2014. Violence against women: an EU-wide survey. Main results report; Geostat (National Statistics Office of Georgia). 2017. National Survey on Violence Against women in Georgia; HCP (Haut-Commissariat au Plan). 2019. Rapport sur les violences faites aux femmes et aux filles, Enquête Nationale sur la Violence à l’Encontre des Femmes et des Hommes; INSTAT (Albanian Institute of National Statistics). 2018. National Population Survey. Violence Against Women and Girls in Albania; UBOS (Uganda Bureau of Statistics). 2021. National Survey on violence in Uganda. Module 1: Violence against women and girls; Instituto Nacional de Estadística y Geografía (INEGI). 2021. Encuesta Nacional sobre la Dinámica de las Relaciones en los Hogares.

¹² UBOS 2021.

¹³ Instituto Nacional de Estadística y Geografía (INEGI) 2021. Módulo sobre Ciberacoso (MOCIBA).

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instruments, filling data gaps in official statistics and elucidating the scope of technology-facilitated violence against women. 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.¹⁴

9. Non-representative survey data: technology-facilitated violence against women 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 technology-facilitated violence against women, or the inclusion of new and more context-specific forms of technology-facilitated violence against women, 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 abuse¹⁵ featured a more inclusive definition of online abuse, giving survey respondents the option to select from 28 types of behaviours.

B. Quantitative administrative data

10. Service data: data from government and civil society services can provide useful insights such as how reporting trends change over time, quality of services and estimated costs of service-provision. Example: the national police of Morocco¹⁶ 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.
11. Transparency reports from technology companies: available data on technology-facilitated violence is limited, particularly on technology-facilitated violence against women. Information is lacking on perpetrators and targets' age, sex and gender identify and other key socio-demographic factors, and on the geographic context or scope of reported incidents.

C. Qualitative data

12. '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 technology-facilitated violence against women, 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 technology-facilitated violence against women 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 technology-facilitated violence against women, and identifying ways of including them in quantitative studies. These methods are also important for awareness-raising among research participants. Example: Messing et al.'s¹⁷ interviews with residents of a women's shelter helped illustrate how technologies are interwoven throughout women's

¹⁴ UN Women. 2021. Violence against women in the online space: insights from multi-country research in the Arab States.

¹⁵ Glitch UK & ERAW Coalition 2021

¹⁶ Agence Marocaine de Presse 2021. Plus de 61.000 affaires de violence contre les femmes enregistrées depuis le début de l'année (DGSN)

¹⁷ Messing, J., M. Bagwell-Gray, M.L. Brown, A. Kappas, and A. Durfee. 2020. “Intersections of Stalking and Technology-Based Abuse: Emerging Definitions, Conceptualization, and Measurement.” *Journal of Family Violence* 35 (7), pp. 693–704.

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.

13. Digital ethnographies: innovative qualitative research methods that are uniquely fit for studying technology-facilitated violence against women. 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 technology-facilitated violence against women, and the ways in which online environments exacerbate risks of violence.

D. Mixed methods

14. 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 technology-facilitated violence against women 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 technology-facilitated violence against women 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.¹⁸ 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.

III. Current state of evidence and data

A. Forms of technology-facilitated violence against women

15. From the few studies that compare different forms of technology-facilitated violence against women, an overarching finding is that sexual harassment and stalking are more commonly reported forms of technology-facilitated violence,¹⁹ often perpetrated via image-based abuse²⁰ and unwanted messages, posts and phone calls.²¹

¹⁸ Blake, K.R., S.M. O’Dean, J. Lian, and T.F. Denson. 2021. “Misogynistic Tweets Correlate with Violence Against Women.” *Psychological Science* 32 (3), pp. 315–325.

¹⁹ Malanga, D. 2021. “Survey of Cyber Violence against Women in Malawi.” *Proceedings of the 1st Virtual Conference on Implications of Information and Digital Technologies for Development*, 2021, pp. 623–34; Economist Intelligence Unit. 2021. “Measuring the Prevalence of Online Violence against Women.”; UN Women 2020a.

“Online Violence Against Women in Asia: A Multicountry Study”

²⁰ Hassan, F.M., F.M. Khalifa, E.M. El Desouky, M.R. Salem, and M.M. Ali. 2020. “Cyber Violence Pattern and Related Factors: Online Survey of Females in Egypt.” *Egyptian Journal of Forensic Sciences* 10 (1); UN Women 2022a. “Accelerating efforts to tackle online and technology-facilitated violence against women and girls.” New York: UN Women; Glitch UK & EVAW Coalition 2020.

²¹ INSTAT 2019; Cotter and Savage 2019.

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B. Contexts of technology-facilitated violence against women

16. Of the few studies that compare the contexts in which technology-facilitated violence against women 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).²² 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 technology-facilitated violence against women.²³

C. Risk factors of technology-facilitated violence against women

17. Studies that include both men and women illustrate that: violence in digital contexts affects everyone²⁴ but women are more likely to experience more severe forms of technology-facilitated violence (such as sexual harassment and stalking) compared to men,²⁵ and that women and non-binary individuals who report online violence are often targeted because of their sex and gender identity.²⁶ Studies also found that young women and girls;²⁷ women in public life;²⁸ lesbian, gay, bisexual, transgender, intersex, queer and other (LGBTIQ+) people;²⁹ racialized, minoritized and migrant groups of women;³⁰ 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.³¹

²² Hassan et al. 2020; Iyer et al. 2020; UN Women 2022a.; Glitch UK & EAW Coalition 2020; UBOS 2021.

²³ Iyer et al. 2020; Posetti, J., N. Aboulez, K. Bontcheva, J. Harrison, and S. Waisbord. 2020. "Online violence against women journalists: a global snapshot of incidence and impacts." Paris: UNESCO; UN Women 2022a; Hicks, Jacqueline. 2021. "Global evidence on the prevalence and impact of online gender-based violence (OGBV)," Knowledge, Evidence and Learning for Development (K4D).

²⁴ Buchanan et al. 2021; Pew Research Center 2021; Powell et al. 2018; Cotter and Savage 2019.

²⁵ Pew Research Center 2021.

²⁶ Ouerghi et al. 2020; Mondal, M., S. Araújo, S. Leandro and F. Benevenuto. 2017. "A Measurement Study of Hate Speech in Social Media." HT 2017 - Proceedings of the 28th ACM Conference on Hypertext and Social Media, pp. 85–94; Pew Research Center 2021; Iyer et al. 2020.

²⁷ Sambasivan et al. 2019; Pew Research Center 2021; Economist Intelligence Unit 2021; Babvey, P., F. Capela, C. Cappa, C. Lipizzi, M. Petrowski, and J. Ramirez Marqueza. 2021. "Using Social Media Data for Assessing Children's Exposure to Violence during the COVID-19 Pandemic." Child Abuse and Neglect 116 (2).

²⁸ Kumar, P., A. Gruzd, and P. Mai. 2021. "Mapping out Violence Against Women of Influence on Twitter Using the Cyber-Lifestyle Routine Activity Theory." American Behavioral Scientist 65 (5), pp. 689–711; Zagloul, N., M. Rasha, R.M. Farghaly, H. ELKhatib, S.Y. Issa, and S.M. El-Zoghby. 2022. "Technology Facilitated Sexual Violence: A Comparative Study between Working and Non-Working Females in Egypt before and during the COVID-19 Pandemic." Egyptian Journal of Forensic Sciences 12 (1); UN Women 2020a; UN Women 2022; Posetti et al. 2020; Rego, R. 2018. "Changing Forms and Platforms of Misogyny: Sexual Harassment of Women Journalists on Twitter." Media Watch 9 (3), pp. 472–485.

²⁹ Powell 2018; Ouerghi et al. 2020; Sambasivan et al. 2019; Cotter and Savage 2019; Pew Research Center 2021.

³⁰ Vidgen 2019; Iyer et al. 2020; Gallego et al. 2017; Glitch UK & EAW Coalition 2021; Pew Research Center 2021.

³¹ Ibid.

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D. Impacts of technology-facilitated violence against women

18. Studies have used a range of qualitative and quantitative research methods to detect the gendered impacts of technology-facilitated violence against women which have been found to: 1. Promote cultures of violence, including the normalization of misogyny and VAW, particularly among social networking platforms.³² 2. Be as severe as offline VAW.³³ 3. Be often connected to offline acts of physical, sexual and emotional violence, as part of the continuum of violence.³⁴ 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, technology-facilitated violence against women.³⁵ 5. Worsen women's economic exclusion, given the growing role of digital tools and technologies in the modern economy.³⁶ 6. Stifle women's voices and infringes upon women's rights to political participation.³⁷ Research has shown how women in politics and women journalists are particularly targeted, and how experiences of technology-facilitated violence against women are driving them out of these professions.³⁸

IV. Challenges

A. Methodological challenges

19. Lack of a shared operational definition and methodology for monitoring, measuring and analyzing technology-facilitated violence against women, including a common umbrella term and a shared vocabulary of its forms and modes.
20. 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.
21. Limitations of social media data. Given the speed and breadth of online interactions, AI-based research methods are needed to investigate technology-facilitated violence against women but they have important limitations such as bias in assumptions and data sets.

³² Powell 2018; Vidgen 2019; Iyer et al. 2020.

³³ Powell 2018; Sambasivan et al. 2019; Crooks, H.R. 2017. "An Intersectional Feminist Review of the Literature on Gendered Cyberbullying: Digital Girls." *Jeunesse: Young People, Texts, Cultures* 8 (2), pp. 62–88; Medeiros de Araújo et al. 2022; Messing et al. 2020; Iyer et al. 2020; Patel, U., and R. Roesch. 2022. "The Prevalence of Technology-Facilitated Sexual Violence: A Meta-Analysis and Systematic Review." *Trauma, Violence, and Abuse* 23 (2), pp. 428–43.

³⁴ Sambasivan et al. 2019; Reed, L. A., L.M. Ward, R.M. Tolman, J.R. Lippman, and R.C. Seabrook. 2018. "The Association Between Stereotypical Gender and Dating Beliefs and Digital Dating Abuse Perpetration in Adolescent Dating Relationships." *Journal of Interpersonal Violence* 00 (0), pp. 1–25; Blake, K.R., S.M. O'Dean, J. Lian, and T.F. Denson. 2021. "Misogynistic Tweets Correlate with Violence Against Women." *Psychological Science* 32 (3), pp. 315–25.

³⁵ Sambasivan et al. 2019.

³⁶ World Bank. 2022. "Online Violence Against Young Female Workers: Risks, Threats and Mitigation Strategies." *Solutions for Youth Employment (S4YE) Knowledge Brief series: Issue 19.*

³⁷ Kumar et al. 2021; Faith, B., and E. Fraser. 2018. "VAWG Helpdesk Research Report What Works to Prevent Cyber Violence against Women and Girls?" 212, pp. 1–16; HRC (Human Rights Council). 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. p. 7.

³⁸ UN Women 2022a.

B. Ethical challenges

22. Ethical and safety protocols, including survivor-centred 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-centred research— as well as specific VAW research standards, especially with regards to ethical and safety protocols and dedicated training of interviewers.
23. 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.
24. Lack of response services. Following guidance on researching VAW, data should not be collected from survivors of technology-facilitated violence against women without ensuring full privacy and access to necessary support services or protection mechanisms (e.g., effective restraining orders against cyberstalkers).

C. Socio-political challenges

25. Lack of overall problematization and awareness around technology-facilitated violence against women. Due in part to a lack of data and dissemination of data findings, there is a lack of awareness around technology-facilitated violence against women —which can in turn stymie prevention and response policies, programmes and services, thus further impeding data collection efforts. The lack of awareness around technology-facilitated violence against women 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.
26. 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).
27. Need for significant multi-stakeholder partnership and coordination. Given the unique role of global technology companies in spaces where technology-facilitated violence against women takes place, the ubiquitous nature of ICTs, and the rapid and potentially cross border impacts of technology-facilitated violence against women, multistakeholder efforts are required to fill the data gaps.
28. The limited data that exist are often biased towards the Global North. Like all forms of violence against women, technology-facilitated violence against women 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.

V. Key recommendations

A. Develop standardized methodologies for data collection, analysis and use

29. 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).
30. 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.
31. 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.
32. 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 technology-facilitated violence against women as they emerge.
33. Invite technology companies to participate in the development of these standards, to collect their insights around privacy rights and other technological considerations.
34. Ensure relevant and globally applicable standards to enable evidence generation on technology-facilitated violence against women from low- and middle-income countries. This may require knowledge-sharing on how to customize studies based on local contexts.

B. Investments

35. Invest in qualitative research, which is key for identifying new and emerging forms of violence, and thus informing the development of quantitative survey instruments.
36. Invest in independent studies and citizen-generated data, particularly by CSOs, to capture diverse forms of technology-facilitated violence against women, and to reach diverse groups who may otherwise be underrepresented in data.
37. 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 technology-facilitated violence against women.

C. Legislation and norms

38. Develop or extend legal definitions of and policies on violence against women to include technology-facilitated violence against women. 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 catalyse further action to build a shared understanding of what technology-facilitated violence against women is to inform data collection that is comparable across sectors.

39. Develop legislation requiring technology companies, provided ethical safeguards are in place, to share a common set of metrics, including forms of technology-facilitated violence against women disaggregated minimally by age, sex, and geographic contexts, acknowledging that individuals and cases should not be identified for privacy and safety reasons.
40. Aligned with international standards, include a comprehensive set of technologies in legal definitions of technology-facilitated violence against women, including any digital tools that may assist, aggravate or amplify violence against women, rather than only including online platforms or social networking sites.

D. Moving forward: Future research

41. Analyze how digital technologies and tools contribute to specific forms of violence against women like human trafficking and religious and political extremism, to complement growing evidence on technology-facilitated sexual harassment, stalking and hate speech.
 42. Generate evidence on more diverse tactics of technology-facilitated violence against women, including Zoom-bombing, trolling, doxing, impersonation, hacking and misinformation.
 43. 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.
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