Corrected: Author Correction

Addressing violence against children online and offline

This paper calls for actors working to end violence against children to situate online violence within the broader violence against children agenda. This requires a common conceptual framework that addresses violence in all areas of children's lives, improved data collection efforts and integrated implementation guidance for prevention.

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iolence against children is everywhere. In 2016 alone, up to 1 billion children around the world experienced physical, sexual or emotional violence¹. In response, the last decade has seen an unprecedented acceleration of research on violence against children, with some emerging evidence for effective prevention and response strategies. Most violence that children experience occurs in the physical spaces where they live, learn, play and work^{2,3}. Increased internet access and use by children across the globe has added another dimension to consider: the online environment. As more children gain access to the internet, the risk of experiencing violence may be increasing. What happens on the internet, who children meet online at any given time and how these online events translate into violence is difficult to track or predict. The increased attention to the online world as a new domain where children can experience violence has revealed that it is becoming more complex than ever to determine how best to keep children safe.

The ground-breaking work of the WeProtect Global Alliance, together with the UK Home Office, has established a platform to support a diverse range of stakeholders to update national child protection systems to include online violence. But, as the violence-prevention community grapples with the challenges brought about by the internet, efforts to prevent online violence are hampered in part by a lack of clarity about what online violence actually means and how it relates to other forms of violence.

The following three scenarios (Fig. 1), commonly considered cases of online violence against children, highlight how the lines between online violence and other forms of violence are blurred, making it difficult to advance evidence-informed prevention and response.

These scenarios have no straightforward answers; in most cases, the accurate response seems to be 'all of the above'.

Scenario #1

A child is sexually abused in the home and the act is photographed. The pictures are sold online and widely shared

Does this constitute a case of online sexual violence, or sexual violence in the home?

Scenario #2

A child receives hurtful and threatening messaged on a social networking site. The chld arrives at school feeling intimidated by classmates.

Does this constitute cyber-bullying, peer violence or school-based violence?

Scenario #3

A child sends explicit images to a partner, who shares these with classmates. The images spread through social media and the child is bullied. Eventually the child commits suicide.

Does this constitute online violence, sexual abuse or school-based violence?

Fig. 1 | **Online or offline violence against children?** These three scenarios illustrate cases where digital technology is enabling or facilitating violence against children in different environments. Each scenario shows the difficulty of distinguishing whether the violent act is perpetrated online or offline. The purpose is to convey that technology is an integrated part of people's lives and that in many cases attempts to separate online violence from offline violence is impossible or misleading.

Recognizing that in children's worlds, technology and social problems interact⁴, the global violence-prevention community will benefit from understanding the connections between children's online and offline experiences of violence. Even though online violence brings unique challenges that may require specialized responses, approaching online violence and other forms of violence as distinct phenomena may be distracting the field of violence prevention from identifying solutions that can simultaneously address multiple forms of violence, online and offline.

Towards Agenda 2030 goals

In 2002, the World Health Organization noted that research and prevention efforts for different forms of violence were being developed in isolation, fragmenting efforts that could be more effective if linked together⁵. As progress towards the Sustainable Development Goals of Agenda 2030 continues, it is critical that implementation and learning around violence research and prevention account for violence in all domains of a child's life.

While the internet has added a new dimension to where and how violence is perpetrated, online violence most likely shares commonalities with other forms of violence in terms of its root causes (for example, poverty, rapid socioeconomic change or gender inequality). These commonalities were recently highlighted by the Human Rights Council's Special Rapporteur on Violence Against Women: studies of violence against women and girls suggest that harassment from the offline world often extends into the online world, entrenched in and enabled by structural, institutional or community level factors. The reverse is true as well: online grooming or abuse can translate into real world harms.

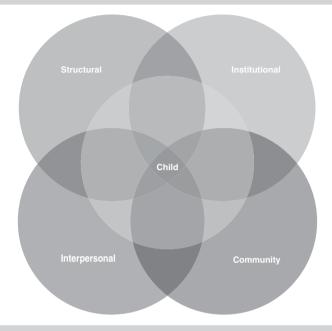
Fast-tracking the online violence learning curve and making the most of over a decade of work on violence against children will enable the development of holistic prevention and response strategies that tackle online and offline violence together.

We propose three ways to advance the global violence prevention agenda: through sharing and improving upon a common conceptual framework for online and offline violence, by collecting empirical data on children's entire social ecology and by designing prevention programmes that address violence against children in multiple domains.

Drivers

Structural: The macro-level political, economic and social policy environments and the norms the shape them.

Institutional: Formal institutions, organizations and services that are governed by a set of rules, policies or protocols expected to determine how things function.



Risk factors

Community: Social capital or networks influenced by particular opinions, beliefs and norms that may affect interpersonal relations, including informal institutions and places of social gathering.

Interpersonal: Immediate context of violence and situational interactions between individuals involving household, family, intimate or acquaintance relationships (i.e., children's relationships with their parents, peers and community members) and including multigenerational norms and values.

Individual/child: Personal history and individual developmental factors that shape response to interpersonal and institutional/community stressors. Importantly, the integrated framework maintains the child (rather than 'the individual' representing a list of risk or protective factors) at the center, interacting, interfacing and overlapping with a variety of drivers, risk and protective factors throughout the lifespan.

Fig. 2 | The integrated child-centred framework. The integrated child-centred framework is based on Bronfenbrenner's traditional socioecological model, but highlights the potential intersectionality of each level rather than presenting them in a visual manner that may be interpreted as less dynamic and more hierarchical than intended. It was designed to assist practitioners in visualizing how drivers and risk and protective factors for violence against children interact within a child's social ecology. The integrated framework recognizes that a driver, such as migration, is not as distal as represented in the traditional socioecological model. Image adapted with permission from UNICEF (ref. ¹¹).

The social ecology of violence

Violent acts are not merely an interaction between a child and one or more other individuals, but are related to the entirety of that child's life environment. A child's experience of violence is determined in part by their own personal capacities and vulnerabilities, their relationships within the family, as well as relationships, known or unknown, in their wider community, including the school and online.

The integrated child-centred framework (Fig. 2) demonstrates how a child's

experience of violence interacts within and between domains. Risk and protective factors reflect the likelihood of violence occurring due to characteristics typically measured at the individual, interpersonal or community level; institutional or structural factors, known as the drivers of violence, create the conditions in which violence is more or less likely to occur. These can include policy, governance and economic priorities of institutions meant to serve children, as well as factors such as rapid socioeconomic

change, forced migration, gender inequality and racism.

The framework highlights the multiplicity and overlapping nature of issues requiring attention to make a child's world safe. For nearly two decades, studies and reviews have mapped out the interconnectedness of the multiple levels in the framework and have concluded that the interaction of factors in the framework delineates how, where, when and why violence occurs in children's lives^{2,5,7}. Efforts to prevent one type of violence in one place without also changing structural inequities and norms will make sustained change less likely⁵. Applying the same reasoning to online violence is necessary.

Situating online violence

The internet infrastructure facilitates a number of harms against children, including the spread of child sexual abuse images and messages, sexual and non-sexual harassment, and sextortion. Messages and images can easily be retrieved and shared in the future, causing the potential for recurring harm.

Because most children today spend a great deal of time on social networking platforms or online games, perpetrators have new ways to contact children to groom or abuse them directly. Situating online violence in existing violence research and prevention strategies requires us to reconfigure existing frameworks to include this new domain.

Those who study and seek to address, for example, cyberbullying may have a lot to learn from research and prevention of traditional bullying. A report by the Special Representative of the UN Secretary-General on Violence against Children[®] notes that "a separate discussion of traditional bullying and cyberbullying definitions, incidence and policy miss the deeper trend, which is to recognise the increasing connections between the two."

Understanding the online environment is important as it brings unique aspects that need to be better understood. But addressing cyberbullying as a separate phenomenon caused by or occurring only on the internet can be misleading and risks wasting resources that would be better spent on holistic approaches. The violenceprevention community has much to gain by an integrated approach in which online violence is prevented by interventions addressing multiple levels of the framework. For example, at the structural level, addressing issues of poverty and deprivation might relieve pressures that could drive a parent to produce and sell sexual abuse materials online for financial gain. At the

community level, harmful social norms that justify such practices as a legitimate way to generate income need to be changed.

None of these interventions concern the online world per se, but could be effective in reducing multiple forms of violence against children, some of which have an online component. Drawing on and possibly adapting traditional violence prevention strategies might be a useful entry point for preventing online violence and other forms of violence together.

The tendency by various actors, including governments, to sometimes silo online violence and artificially separate it from related offline manifestations can have unfortunate impacts on institutional structures. This is particularly the case when online violence is grouped with other technology-related issues in ministries, rather than being dealt with alongside those responsible for ensuring gender equality, improving national child protection systems, advancing women's and children's rights, and strengthening law enforcement and judiciary capacity.

Towards a common conceptual framework

The integrated child-centred framework (Fig. 2) offers a useful starting point towards a common framework, but it needs to be enhanced by incorporating the internet as an additional domain that interacts with all levels. The challenge now is to encourage researchers and practitioners to clarify how these interactions may drive violence against children and undermine (or enhance) prevention and response strategies. This requires improved definitions of online violence that help clarify which threats are isolated to the online environment, adequately distinguished from violence that originates elsewhere or occurs in multiple spaces at once.

A common framework helps researchers, practitioners and policy makers visualize the intersecting and overlapping domains and populate them with evidence of what may be driving violence against children in a given country. Available national data and findings can be effectively plotted on the childcentered framework (Fig. 2) for violence prevention planning². This will allow us to understand which issues demand unique responses because of internet technology (for example, updated legislation or better content filters) and which demand responses mirroring or complementing those that are already part of existing violence prevention strategies (for example, shifting harmful social norms or parenting programmes).

As an example, with the proliferation of internet access, online sexual harassment and sextortion constitutes a growing

problem for both adults and children, particularly women and girls. The norms and moral codes that enable sexual violence against women and girls offline seem to extend to the online environment as well. Consequently, prevention and response to sexual violence against women and girls committed online need to be addressed at various domains in the integrated childcentred framework:

- At the structural level, by empowering women through more equitable economic and educational opportunities;
- At the institutional level, through legislation from the judiciary and filtering of offensive content by service providers; and
- At the community and interpersonal levels, by changing patriarchal norms and community-based or personal values that drive sexual violence against women and girls in general.

While online safety education may provide children with better knowledge of how to avoid certain risks online or respond appropriately, the violence will not stop as long as it is enabled by harmful norms and values. Addressing the challenges of sexual violence in all contexts is a much more powerful and sustainable political, financial and social investment.

Collect more relevant data

To use the common framework effectively, the quality of data collected is important. Data that cover multiple forms of violence are necessary to explain their interactions, thus improving on-the-ground guidance for interventions. The Disrupting Harm project, funded by the Global Partnership to End Violence Against Children and implemented by UNICEF, ECPAT International and INTERPOL, will generate such data. Likewise, the Violence Against Children survey from the US Centers for Disease Control and Prevention now includes indicators on non-contact abuse facilitated via the internet. All stakeholders who study violence against children should collect data on multiple forms of violence using tested and shared indicators.

As the field of violence prevention matures, indicators that capture a child's life context beyond basic demographic indicators, covering all domains of children's lives, are also needed. These data will reveal entry points for prevention strategies, creating responsive rather than reactive solutions. Survey data complemented by qualitative methodologies are likely to capture sensitive information typically underreported in surveys.

Integrated implementation guidance

To date, international agencies have demonstrated unprecedented agreement by creating two compendiums of the best available evidence. One is *INSPIRE: Seven Strategies to End Violence Against Children*°, providing guidance on how to implement evidence-based prevention programmes; the second is the WeProtect Global Alliance's Model National Response¹0, designed to build country responses to online child sexual abuse.

To help countries prevent what is ultimately one problem—violence against children—a common prevention strategy that integrates rather than separates the online context would be useful. While a separate framework for online violence raised awareness of the extent of the problem, the world is now better informed and moving towards generating the evidence needed for holistic and integrated prevention efforts. An update of the INSPIRE package that includes content from the Model National Response would strengthen the overall package. Recommendations provided in this comment, alongside ongoing research and implementation efforts by stakeholders worldwide, will contribute to more robust and shared guidance.

Towards shared solutions

The field of violence prevention has an enormous opportunity to optimise prevention and response in all settings. Connecting what happens to children online and offline is both vital and strategic. Increasingly, children do not recognise a divide between their online and offline lives: our response to violence must take this into account.

Without agreement from all stakeholders, including policy makers, researchers and practitioners, on the appropriate framework to use, which data collection strategies and measurements to employ and a shared understanding of how to approach implementation, our collective impacts will be less effective. Key to this is the coordination and alignment of resources—and vision—by donors who fund research, prevention and response solutions to end all forms of violence against children. Critically, the violenceprevention donor environment is still small and under-resourced in relation to the size of the problem. Combining efforts to explore multiple pathways, outcomes and potential solutions to violence affecting children—in all spaces they inhabit—makes good investment sense at both the international and national levels. At the country level, this means that costed national plans of action to end violence should address all types of violence in all contexts, building more coordinated responses with the support of multiple

frontline ministries. Globally, this requires an integrated agenda that situates online violence within the broader violence against children field—as a starting point, this comment provides a framework and considerations for improved data collection and implementation guidance.

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Competing interests

The authors declare no competing interests.