DIGITALLY ENHANCED CHILD PROTECTION

How new technology can prevent violence against children in the Global South

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INTRODUCTION

The last decade has witnessed growing appreciation of the potential of information and communication technologies (ICTs) to protect children from violence. The issue of violence against children (VAC) is of singular importance. And while the full scope and scale of VAC remains hidden from view there is wide spread consensus that "every year and in every region of the world, millions of children suffer the cumulative impact of physical, mental and emotional violence, and millions more are at risk".[1] Although ICT innovation for child protection is comparatively advanced in North America and Western Europe, there is less known about new toolsin lower- and middle-income settings in the Americas, Africa and Asia.

This Strategic Paper begins filling this knowledge gap and reviews the emerging character and functions of ICTs to prevent VAC in the global South. Drawing on assorted cases from Benin, Brazil, Kenya, Uganda and other countries, it provides a hint of the diversity of emerging experiences around the world. In the process, the Strategic Paper providesinsights into emerging trends, typologies, and threats. Key findings include:

- Mobile and digital technology are being harnessed in multiple ways to protect children, including through: (a) the digitization of existing child protection systems (b) helplines (c) citizen reporting and crowd mapping (d) mobile research and survey tools(e) big data analysis, and (f) tech-driven campaigning and information sharing;

- These initiatives frequently combine the offer of assistance to children with the collection of real time data. This model in turn generatescritical information for advocacy and can inform future child protection interventions;

- Such approaches save time and money, and are breaking down the social, cultural and practical barriers to violence reporting. However, digital data collection raises important ethical questions about consent and confidentiality;

- Innovation is emerging from a wide range of fields, including child protection, social development, the humanitarian sector, public health and the wider violence prevention field, and is often facilitated by creative public-private partnerships. Different disciplines are using the same tools;

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[1] See SRGS (2014) pp. xii.

- Basic SMS based reporting systems have immense potential. Certain open source digital platforms offer the potential for scaling-up, especially systems such as Frontline SMS, Rapid SMS and Ushahidi, which integrate basic mobile phones for crowd-sourcing violence reporting and community mapping; and

- There isa widening array of initiatives that enable children themselves to be informed, empowered and included in their own protection. Digitized survey tools, that can be used for and by children even in emergency settings, include Open Data Kit and Kobo Toolbox.

The *Strategic Paper* considers the emerging landscapes of ICTs for VAC. It first sets the scene exploring the character and dynamics of violence against children, especially in low- and middle-income settings. The opening section also considers the expansion of ICTs and ethical implications in their application among children and youth. The second section introduces a typology of different ICTs including the digitization of child protection systems, child helplines, citizen reporting and crowd mapping, mobile research tools, Big Data analytics and technology-enabled campaigns. Section three explores how different sectors and disciplines are engaging with these new tools – including child protection experts, relief and development professionals and the public health community. The *Paper* closes with a brief consideration of next steps in the evolution of ICTs to prevent and reduce VAC.

SETTING THE SCENE

The last five years have given rise to a bewildering assortment of innovations within the ICT and violence prevention sectors.[2] An assortment of contributions are being designed, tested and applied byso-called digital humanitarians, development specialists, child protection experts, ICT start-ups and software firms as well as spirited programmers and hackers. The diversity of new tools is impressive, ranging from crowd sourced maps, smart phone apps to improve safety, to digital upgrades of conventional surveys. These transformations are proceeding quickly and technologies are being openly shared in real time across disciplinary, political and socialfrontiers. But in order to usefully assess the potential and pitfalls of these (new) innovations, it is important to understand the context and nature of the (old) problem.

The price of internet connection has dropped dramatically in the past decade, while services have only gotten better. This means that you can be online from most parts of the world." Photo: iStock

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[2] See for example Crolazzoli (2014), Mancini (2013), Mancini and O'Reilly (2013), and Muggah and Diniz (2013).

The problem of violence against children

Although difficult to track with precision, violence committed against children occurs in virtually every setting imaginable. This includes places and spaces where children should feel safe: their communities, their schools and their households. VAC is not reserved exclusively to physical violence. It includes corporal punishment; bullying; harmful traditional practices such as early and forced marriages, female genital mutilation and so-called honor crimes; sexual violence; torture and other cruel, inhuman or degrading punishment and treatment.[3] A global study by the United Nations found most violence against children occurs at home, and most goes unreported.[4]

The knowledge base about VAC is starting to expand. In September 2014, the United Nations Children's Fund (UNICEF) released the largest-ever compilation of hard data on VAC. Thereport *Hidden in Plain Sight* documents the staggering extent of physical, sexual and emotional abuse worldwide. It finds that about 17 per cent of children in 58 countries are subject to severe forms of physical punishment (i.e. hitting on the head, ears or face or hitting hard and repeatedly). What is more, slightly more than 1 in 3 students between the ages of 13 and 15 worldwide are regularly bullied in school.[5] It also determined that roughly 120 million girls under the age of 20 worldwide (about 1 in 10) have experienced forced intercourse or other forced sexual acts. It also observed that roughly 1 in 3 married adolescent girls aged 15 to 19 (84 million people) were at some time victims of emotional, physical or sexual violence committed by their husbands or partners. Moreover, the report observed that one fifth of homicide victims globally consist of children and adolescents under the age of 20, resulting in about 95,000 deaths in 2012.

Childhood maltreatment and neglecthas short and long-term consequences. There are the immediate effects related to physical and psychological well being, but also life-long and inter-generational impacts. Children exposed to VAC are more likely to become unemployed, live in poverty and express violent behavior toward others. Violence is 'passed on' from one generation to another, be it through role modeling, social isolation, or possibly even genetic imprinting.[6] Understandably, the total costs on societies in social and economic terms are enormous. The Copenhagen Consensus estimates that harsh child discipline, coupled with interpersonal violence, intimate partner violence and sexual abuse are equivalent to around 11 per cent of global gross domestic product.[7]

There is also growing attention to the underlying causes of VAC in scholarly and practitioner networks. Most experts concede that violence against children is a serious a societal problem rooted not reservedly in individual or family behavior, but also in wider economic and social inequities, the quality and quantity of educational opportunity, cultural norms that condone or sanction violence, the absence of adequate preventive policies

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[3] *There is no universally accepted definition of what constitutes child abuse and neglect. ConsultPinheiro(2006) for more information.*

[4] *See for example Pinheiro(2006).*

[5] *See UNICEF (2014a). The authors note that the data is derived only from individuals who were able and willing to respond, and therefore represent minimum estimates.*

[6] *See for example Berlin et al (2011), Callaway (2013), and Cicchetti and Rizley(1981). See the UN Study of Violence against Children for a comprehensive global overview (Pinheiro 2006).*

[7] *See Hoeffler and Fearon(2014).*

and legislation, and weak or uneven governance and rule of law.[8] In other words, interventions to prevent VAC must be pursued across different sectors and in a careful strategic manner to achieve maximum impact. In 2014, only 39 countries worldwide legally protect children from all forms of corporal punishment.[9] Indeed, VAC persists in many parts of the world because it remains undocumented and unmeasured, as a result of poor investments in data collection and dissemination.

Information and Communication Technology (ICT)

Meanwhile ICTs are revolutionizing the way markets function, governments govern and societies interact. Children and teens are increasingly using new technology to learn, play, communicate and engage with the rest of the world. Even in the remotest, poorest and most conflict-ridden parts of the planet, use of mobile technology and the Internet is soaring. In these and other settings, mobilesare generating a massive impact on government accountability, police oversight, agricultural and health extension services and elsewhere. In thefinancial sector, for example, "mobile money" is leapfrogging the rollout of plastic payment systems.[10] While not a panacea to structural challenges in low- and middle-income settings, ICTs are playing a surprisingly important role in shaping new forms of political, social and economic empowerment.

There are of course risks associated with the rapid spread and diffusion of ICTs. For example, as children's online and offline lives begin to expand and blur, so do the risks and exposure to exploitation and privation. Cyber-bullying and online grooming – a widely acknowledge problem in North America and Western Europe but less so in Latin America, Africa and Asia – are also becoming more common. They are in some ways being aggravated by the corollary expansion of online social networks and related platforms. Children are exposed to ever more violent and sexually graphic material at increasingly younger ages, and may be encouraged to take "virtual risks" that they would not necessarily take in real life.[11]

Indeed, bullying, sexual violence and human trafficking are activities that can be alternately enabled and prevented through the use of ICTs. Child trafficking is a particularly good example. On the one hand, new technologies ranging from social media outlets to cloud-based computing can be used for communications and transactions between traffickers, to recruit victims, and transmit pornographic images of trafficked persons. Meanwhile, new technologies can also dramatically enhance the effectiveness of criminal investigations, generate evidence to support prosecutions, and interrupt traffickers through the use of digital security and better control over documents and border security.[12]

With greater access to mobile phones and the Internet, children can more easily call for help. What is more, innovative new tools are being rolled-out to change attitudes that condone violence and facilitate the reporting of abuse that would otherwise go undocumented. While the Internet may make children more vulnerable to

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[8] *See Dahlberg and Krug (2002), Pinheiro (2006) and UNICEF (2014a).*
[9] *See UNICEF (2014a).*
[10] *See Kenny (2014).*
[11] *See Finkelhor(2011).*
[12] *See UNGIFT (2008).*

online bullying and encourage them to make riskier choices, it is equally plausible that ostensibly normal risk-taking behavior that accompanies adolescence may now be occurring more often in the virtual realm than in reality.[13] Further research is needed on the multiple ways in which new technologies affect children's vulnerabilities, especially in low-income and unstable areas, where data are in patently short supply.

Ethics

There is an extensive literature on the ethical considerations associated with conducting field research on or with children and violence.[14] Guidelines are primarily based on the principles of protection (to ensure that neither children nor adults come to any harm as a result of the research), informed consent (to ensure that all respondents understand what the research is for and agree to taking part) and confidentiality (to ensure that researchers, and anyone who handles research data keeps the information confidential). Experts also routinely promote children's participation in research and decisions that affect them.

Unfortunately existing guidelines do not adequately address the specific moral hurdles associated with ICTs designed to prevent VAC, that are only recently being debated among experts.[15] Confidentiality is important when dealing with minors because data leaked into the wrong hands may cause further harm to children. New technologies make it is easy to trace data to its origin, especially if photos or videos are uploaded along with GPS coordinates. Even if anonymity is preserved in publication, the possibility exists that data points can be linked to personal details. Furthermore, children may not have the requisite maturity or experience to understand the risks they take when they divulge personal information online or over the phone. Even if they give "consent", the question is whether they are truly "informed" and if it fair to expect children – young, distressed and at risk – to understand the implications of this consent.[16]

Despite the many ethical dilemmas in relation to researching VAC however, shying away from new technology is not an option for development and humanitarian workers. Many of them are increasingly turning to mobile and digital tools to improve the lives and protection of children and other beneficiary groups in conflict and crime-affected settings. But as they do so, they must refine their moral compass and assume the responsibility to reduce associated risks of new technologies and make children aware of them. Any introduction of new technology must go hand in hand with capacity building in media literacy and cyber ethics of everyone who works to protect children.

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[13] *See for example Livingstone et al (2007) and ADD - http://edition.cnn.com/2014/05/01/health/kid-violence-declines/.*

[14] *See Akeson (2011), Carroll-Lind et al. (2011), CPMERG (2013), Hart and Tyrer (2006), Save the Children Alliance (2004), WHO (2007), and ERIC at http://childethics.com. Most who work in this field take a "rights based" approach. According to the 1989 UN Convention on the Rights of the Child, children have rights to provision of their needs, to be protected from harm and to participate in their families, communities and nations. These are clearly laid out in international law as well as in the domestic law of most countries in the world. Moreover the right of the child to participate in matters affecting him or her is made clear in Article 12.*

[15] *See Corlazzoli (2014), IOM and NRC (2012), Raftree and Nkie (2011), and Raftree (2013).*

[16] *For example, even if advised to delete SMS messages or call logs from helpline counselors, children may forget to do so and putting them in danger if the wrong person finds out.*

TYPOLOGY

There are a wide range of experiences related to the use of new technologies to prevent and reduce violence. However, there have been no attempts to assess the landscape of these new tools and how they are being applied. This Strategic Paper proposes a simple typology to support those involved in VAC and related fields of violence prevention (Table 1). The focus is on information and communication technologies being applied to prevent and reduce violence and protect children. Likewise, the emphasis is on low- and middle-income settings [17] and also focused on new technologies related to social media and mobile devices.[18] The preliminary and non-exhaustive typology is informed by UNICEF's review of mobile technologies for child protection, but goes further by including additional innovations and exploring "how" and "by whom" this niche field is being driven forward. [19]

Table 1: Typology of ICT-based initiatives to support VAC prevention in the global South

Type	Approach	Function	Examples
Digitization of existing child protection systems	Upgrading of existing mechanisms or structures within child protection systems from "analogue" to "digital" technology, or from paper-based.	Standardizing and digitizing processes to improve efficiency and transparency, for example for family tracing in emergencies (RapidFTR), case management and birth registration.	The Rapid FTR mobile app was used in Uganda to identify children separated from their families. Digital birth registration systems e.g. in Kenya, Liberia, Pakistan, Uganda and Vanuatu.[20]

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[17] *For example, anti-bullying software that scans students' social media posts and alerts teachers and parents to potentialcyberbullying, suicide or violent threats. Anti-suicide initiatives tend also to be developed world focused (IOM and MRC 2013).*

[18] *For example, ATM style machines in India targeted at women and girls to report domestic violence; 'panic button' alarm systems and recording devices disguised to look like mobile phones for women who's partners have a restraining order. TecSOS was developed by the Vodafone Spain Foundation in collaboration with the Spanish Red Cross and is operating in Spain, Italy, Portugal, Hungary, Ireland and the UK (see Valente (2012) for similar device tested in Argentina); OrUAV's developed by Google and aid agencies to drop deliveries in emergencies where children under 5 are usually the first to become malnourished and die. Virtual Global Taskforce for Combating Online Child Sexual Abuse (amongst others) which also uses latest technology to tackle cybercrime and help target law enforcement operations into online and offline offending.*

[19] *See UNICEF (2011a).*

[20] *See http://www.rapidftr.com and UNICEF (2011a).*

Table 1 - continuation

Type	Approach	Function	Examples
Child helplines	Child helplines are support services for children, run by civil society organisations and or government bodies. Traditionally by phone, communication is now also by SMS and online chat.	Primarily helplines offer information, support, advice or counseling, and refer children to third-party services; Secondary they collect data on the nature and prevalence of calls.	Child Helpline International (CHI) is a network of 178 helplines in 143 countries.Virtual Global Taskforce for Combating Online Child Sexual Abuse uses technological solutions to stop online child sexual abuse.[21]
Citizen reporting and crowd-mapping	Mobile or web-based reporting systems provide the anonymity for people, including children, to speak out about violence, and enable such information to be gathered and mapped in efficient and innovative ways. Information on support is often available.	The combination of SMS and web-based mapping tools, such as Frontline SMS, RapidSMS and Ushahidi, are among the most relevant new technologies for the protection of children in middle- and low-income settings.	Plan International in Benin, uReport by UNICEF in Uganda, Map Kibera in Kenya.[22]
Mobile research and survey tools	Now researchers can use mobile or digital research tools to integrate data collection, transmission, storage and retrieval.	In addition to SMS-based data collection there now are adaptive technologies that leverage existing features available on smartphones or tablets.	The Child Security Index in Brazil uses Open Data Kit.[23]

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[21] *See http://www.childhelplineinternational.org andhttp://www.virtualglobaltaskforce.com.*

[22] *See https://plan-international.org/where-we-work/africa/benin/what-we-do/our-successes/mapping-violence-against-children-in-benin/, http://www.ureport.ug and http://mapkibera.org.*

[23] *See http://en.igarape.org.br/child-security-index/.*

Table 1 - continuation

Type	Approach	Function	Examples
Big data analysis	Big data refers to datasets that are so large and complex that they require new and sophisticated forms of processing to enable enhanced decision making, insight discovery and process optimization.	Use of satellite imagery, traffic sensors, social media, the blogosphere, online searches, mobile banking, hotline usage etc. to improve understanding of the patterns and causes of violence.	Google Global Human Trafficking Hotline Network. [24]
Tech-driven campaigning	This is the idea that communications technology can be used to collect feedback from children en masse, spread messages, raise awareness and rally support around a cause.	Mainly SMS, blogging, and social media (Twitter, Facebook, YouTube etc.)	Example campaigns: #EndViolence [25], #OneBillionRising [26], #BringBackOurGirls [27] and #YesAllWomen. See also "Take back the Tech" on how to use ICT for gender violence prevention. [28]

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[24] *See http://www.google.com/ideas/projects/human-trafficking-hotline-network/.*

[25] *See http://www.unicef.org/endviolence/.*

[26] *See http://www.onebillionrising.org/.*

[27] *See http://bringbackourgirls.us/.*

[28] *See http://takebackthetech.net.*

The digitization of existing child protection processes

Existing mechanisms or structures within child protection systems in multilateral and national institutions are being upgraded from "analogue" to "digital" technology. Most governments around the worldhave evolved child protection systems – laws, structures and processes – that are embedded in public institutions and designed to prevent abuse and neglect, and facilitate intervention when and where necessary. The quality and coverage of these systems of course varies from country to country. Nevertheless, there are signs around the world of how governments and civil societies are beginning to enhance their capabilities using ICTs.

So far the most significant successes are the digitalization of mechanisms to undertake family tracing, case management and birth registration. There are examples of how lessons from this sector are being shared and adapted in other areas of protecting children from VAC.[29] The reform and modernization of these systems can take a number of years to plan and implement and demands careful preparation. This is in order to ensure that the legal provision for upgrading institutions exists, that the technological solutions ultimately rendered are secure, and that transformations are accompanied by appropriate incentives and training to change the attitudes and skills of the professionals managing these systems.

Family Tracing

UNICEF's RapidFTR mobile application and data storage system helps aid workers collect, sort and share photographs and information about children in emergency situations.[30] By offering a clever flagging function, children can easily be identified and registered for care services and ultimately reunited with their families. In western Uganda for example, the tool was used to facilitate the quick identification of children separated from their families, or those unaccompanied by adults in the latest influx of Congolese refugees.[31] Challenges to the use of the tool include the comparatively limited amount of data that can be entered with Rapid FTR and its arguably narrow focus on quantifiable data at the expense of qualitative information.[32] What is more, a stable electricity supply is needed to charge mobile phones, although solar driven battery rechargers are becoming increasingly available.

Birth Registration

The "passport to protection" birth registration provides a child with a legal identity.[33] Without a birth certificate, children may not be able to access basic social services and are vulnerable to a range of abuses, including early marriage, hazardous child labor, military conscription, sexual exploitation, imprisonment in adult facilities and prosecution as an adult. It is therefore of serious concern that the births of one third of children under five have never been registered.[34] As birth registration processes can be time consuming and costly there is growing interest in the use of mobile technologies for scaling up and speeding-up birth registration as part of

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[29] *See Mattila (2011).*
[30] *See http://www.rapidftr.com.*
[31] *See http://www.rapidftr.com/blog/45-rapidftr-is-helping-reunite-congolese-families-in-uganda-.*
[32] *See UNICEF (2011a).*
[33] *See UNICEF (2012b).*
[34] *See UNICEF's data: http://data.unicef.org/child-protection/birth-registration.*

a modern civil registration system. UNICEF and others are partnering with national telecom companies to pilot new systems in Kenya, Liberia, Pakistan, Uganda and Vanuatu.[35] However, new technology cannot resolve inherent problem sof birth registration (e.g. children born at home where parents lack identity documents) and in some countries the legal basis of mobile birth registration may be an issue.[36]

Case Management

A truly integrated and holistic care and support system for children must link different kinds of services for each child, which is practically impossible without the help of ICTs.[37] ICT-based case management is ambitious, but increasingly possible. The idea is to enable social workers to use their mobile phones to gather and transmit data about specific vulnerable children. Services are linked to an online data system that applies a common referral pathway with clear standards, policies and levels of access to data. It is through increased visibility and analytical capability that new technologies are able to identify the children in greatest need and target resources accordingly. By digitalizing and integrating data from disparate and seemingly unconnected social welfare providers, a combined view will be available to help identify relationships that remained previously hidden and help highlight patterns and risks.

Such systems are under-developed in the North, and even more so in the South, although some pilots indicate potential. In Malawi, for example, UNICEF is exploring how mobile phone technology could be used as a case management tool by Community Victim Support Units and at "One-Stop Centers" that offer a package of child protection and health services to vulnerable children.[38] And in Mozambique, UNICEF is exploring how using tablets for the re-registration of social transfer beneficiaries can be leveraged for effective case management in social protection.[39] The biggest challenge is organizational. A functional inter-agency coordination mechanism needs to be developed at national level to ensure compliancy with the policy, to develop minimum standards for referral mechanisms, and to employ qualified people to manage the system at each level of the structure and to change current systems of practice.[40]

Child helplines

A child helpline or hotline refers to a free telephone service that aims to link children in need of care and protection to available services, and use the data to advocate for the availability and improvement of these services. Child Helpline International (CHI) is an international network that of now 178 helplines in 143 countries, which together receive over 13.4 million contacts a year from children and young people in need of care and protection.[41] Similarly, The International Association of Internet Hotline (INHOPE) is a network of

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[35] *See UNICEF (2011a).*

[36] *See UNICEF (2011a).*

[37] *See UNICEF (2014b).*

[38] *See http://unicefstories.org/2014/05/07/a-case-for-case-management-a-case-for-innovation-in-technology/.*

[39] *See UNICEF (2014b).*

[40] *See UNICEF (2011).*

[41] *See CHI (2014).*

51 hotlines in 45 countries worldwide, dealing with illegal content online and committed to stamping out child sexual abuse from the Internet. [42]

Although traditional telephone helplines have existed for decades, it is the recent switch from analogue to digital technology, and the spread of the Internet, that enabled the broadening its services and spin-offs. A child or witness can make a call from any type of phone, making helplines one of the most accessible forms of direct support to children. Exchanges can also happen on email or via a web interface and a callback service by trained counselors following a text message are becoming increasingly commonplace. It is the coupling of mobile technology and confidential helplines that helps children speak out on taboo subjects, such as violence. The principle advantage of these helplines is that they are toll-free, they invoke an easy to remember 3 or 4 digit number, and confidentiality, anonymity and national coverage is usually ensured.[43] From preventing child marriage and prostitution to intervening in abusive situations, CHIs hasve roughly a decade of positive case studies from around the world.[44]

In addition to national helplines, there are now "mobile helpline components" that are grafted into existing projects or included in mobile apps. The award winning "Circle of 6" app was originally aimed at US college students to prevent gender-based violence. The app is now taking off in New Delhi, India, where it uses Hindi and English and links to hotlines and to the "Lawyer's Collective" for legal advice.[45] The South African program loveLife launched a web-based mobile service allowing young people to access information about HIV, employment opportunities, scholarships, and tips to improve their lives. The project includes a call back service, which offers users free mobile connectivity to counselors. A user sends a message to the service saying, "please call me," and the automated system calls back and links the caller to a trained counselor. [46]

Helplines can also generate considerable amounts of data to assess long-term global trends[47] or provide advocacy material to support campaigns and targeted lobbying. For example, Child Helpline International and Plan International use child helplines to collect data on violence against children in schools across Egypt, Paraguay, Sweden and Zimbabwe. The Learn without Fear pilot turned into a global campaign against violence that, in just three years, is purported to have improved the protection of 485 million children from corporal punishment, sexual violence and bullying. [48]

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[42] *See http://www.inhope.org.*

[43] *For an interesting discussion on the issues of confidentiality for helplines, please see MHHP 2007.*

[44] *See CHI (2013) for case studies. What is more, the organization is has developed global guidelines for the design of impact evaluations of helplines worldwide, which suggests that rigorous assessments and cost-effectiveness analyses are forthcoming – see CHI (2012).*

[45] *See http://www.circleof6app.com .There are a handful of similar apps now available, although Circle of 6 seems to be the first to be expanding in the global South. See Gilpin (2014) for an overview.*

[46] *See http://www.lovelife.org.za and Ngcobo (2010).*

[47] *See for example this analysis of trends in bullying: http://www.theguardian.com/news/datablog/2013/may/23/10-years-bullying-data.*

[48] *See Bazan (2011) and http://plan-international.org/learnwithoutfear/learn-without-fear. Another example (but from the North) is Crisis Text Line, a New York-based nonprofit that offers crisis counseling by text message, mostly to teens. Crisis Text Line has helped 70,000 people since it launched a year ago in 2013. An unusual byproduct of the instant-message medium is that these crises leave behind trails of data. The interactive charts here, created by Crisis Text Line'sBobFilbin, allow anyone to see the temporal trends behind the different kinds of dilemmas.*

There are at least three commonly cited challenges with helplines. First, trained staff is needed to manage the calls and this can be both time-consuming and expensive. Second, they only work if their existence is well publicized and known, even among the young and most vulnerable sections of the society. Third, there are outstanding questions about whether and how children are properly served after contact has been made. Counselors make referrals to services – such as shelters, legal services, and clinics. – but if these third-party resources are non-existent, inaccessible or of poor quality, helplines' potential to truly make a difference is naturally constrained.

Citizen reporting and crowd-mapping

Whilst helplines and digitalized protection systems serve important and functional purposes, the real untapped potential lies in digital research tools, citizen reporting and crowd mapping. Violence against children is notoriously under-reported for a range of cultural and practical reasons. In many circumstances children feel pressured to conceal it, particularly when perpetrated by people they know and trust. Fearing their abuser is a common reason for not reporting, and traditional reporting systems tend to be overly bureaucratic, slow and stigmatizing.[49]

The possible anonymity often provided by mobile or web-based reporting allows people, including children, to report on and speak about sensitive subjects. This includes reporting sexual abuse and harassment in societies and places where these issues are taboo. By overcoming the barriers to reporting and help-seeking – owing to fear of reprisals, stigma, limited physical access to protective services or time – ICT-based reporting mechanisms have immense potential to fuel media attention and kick-start debate, improve evidence generation, and even support criminal investigations.[50]

One of the most powerful ways to visualize information is to display it on an interactive map. For decades, participatory mapping techniques have enabled people to identify the spatial dimensions of an issue. Not only is it empowering process but recent advances in both participatory methods and spatial technologies has meant that the type and quality of data now being generated are numerous and novel.[51] Among the most relevant new technologies for the protection of children in middle- and low-income settings are Frontline SMS [52], Rapid SMS [53] and Ushahidi [54], all of which are intended to enhance violence reporting and community mapping. Similarly, Open Street Maps offers free, open source tools and a global map platform that anyone can contribute to.[55]

With these tools, digital systems for reporting abuse can be established whereby incidents of violence or maltreatment are reported directly by children and adults. And just like child helplines, the data generated can provide important information for advocacy and help to plan future child protection interventions. SMS remains

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[49] See, for instance, Pinheiro (2013) and SRSG (2013).
[50] The National Center for Missing & Exploited Children in the US not only has a special telephone number but also a "CyberTipline" whereby leads and tips can be submitted online about suspected crimes of sexual exploitation committed against children. Between 1998 and 2014 more than 2.5 million reports were made to the CyberTipline. See http://www.missingkids.com/cybertipline
[51] See for example Chambers (2007, 2005).
[52] See http://www.frontlinesms.com/.
[53] See https://www.rapidsms.org /.
[54] See http://www.ushahidi.com/.
[55] See http://www.openstreetmap.org.

the most widespread form of reporting in middle- and low-income contexts, although children and youth can also report violence via email, twitter and the web, provided there is sufficient connectivity. People send a text message to report an incidence of violence, which is then automatically mapped on a geo-referenced website. This data is in turn is monitored by an administrator who verifies and organizes the response to each case.

Ushahidi in particular has fuelled the proliferation of violence mapping worldwide. In Turkey the same system of interactive mapping is used to monitor and map violence against children. The map is hosted on a website that additionally provides users with information and media stories, now a "one stop shop" for child rights information and monitoring in Turkey.[56] Aiming to "pin the creeps", SafeCity in India is an online platform created to map areas of sexual abuse.[57] Similarly, HarassMap[58] is an SMS reporting system on sexual harassment in Egypt. Aimed at women and girls, it helps them reclaim spaces and counteract sexist messages that spread easily on social media. Similarly in Cambodia, a Violence Reporting Website allows user to report via different ICT tools, including web apps and text messages.[59]

In Benin, Plan International use Ushahidi and Frontline SMS for the mapping of violence against children.[60] In 2009 they started a project that allowed anyone witnessing any form of child maltreatment to send text messages to alert the government and the police. Visualizing the findings on a map helped raise awareness around the issue and initiate dialogue. Latest reports from Plan indicate that this initiative is now part of a regional VAC project that is being implemented in seven West African countries in partnership with Save the Children.[61]

Similar in concept and design, UNICEF has launched the award winning uReport application for youth to report on development challenges.[62] Within just a year the number of U-reporters grew to over 89,000, with 400 to 500 joining the network daily. There are currently over 240,000 U-report participants and they send up to 10,000 text messages a week that IBM Research at UNICEF interprets and categorizes using an automated message-understanding and routing system.[63] Now the approach is being exported to other countries, such as Brazil.[64]

Community mapping need not be limited to reporting on the specific incidents of violence, but can also include underlying risks and vulnerabilities, as well as and perceptions of insecurity. Map Kibera in Kenya is a partnership between local youth, non-governmental organizations and several United Nations agencies aiming to map the giant slum, Kibera.[65] The project engages young people, particularly young women and girls, and helps identify safe and unsafe physical spaces on the basis of Open Street Maps.[66] It raises awareness and offers broader advocacy opportunities around the issues of HIV and AIDS and other vulnerabilities.

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[56] *See http://www.cocukhaklariizleme.org.*

[57] *See http://www.safecity.in.*

[58] *See http://harassmap.org/en/.*

[59] *See UN Women (2014).*

[60] *Linda Raftree, previously at Plan, has written extensively about the program on her blog "Wait…What!" at http://lindaraftree.com.*

[61] *See http://plan-international.org/where-we-work/africa/benin/what-we-do/our-successes/mapping-violence-against-children-in-benin/.*

[62] *See http://www.ureport.ug/.*

[63] *See http://nymetro.chapter.informs.org/archive/02-2014 main_events_next_meeting.html.*

[64] *In Brazil, UNICEF is working with Massachusetts Institute of Technology and the Public Laboratory for Open Technology and Science to undertake community mapping of environmental risks together with youth (PorDentro da Cidade 2011).*

[65] *See http://mapkibera.org/.*

[66] *See http://www.openstreetmaps.org.*

Also in Kenya, the Spatial Collective is social enterprise applying technology for developmental ends, including the mapping of the Kibera slum. The organization uses GIS technology to map 1,000 child friendly schools, helping the national primary school association identify problem areas and target limited resources.[67] The work of the Spatial Collective, Map Kibera, Ushahidi and many others means that Nairobi is now a leading hub for ICT innovation in Africa.[68]

But there are challenges. A high volume of reports requires a sustained degree of response. This is not always possible, especially in remote and violence-affected areas where services are poor or non-existent. There is the inherent dependency on a skilled administrator for the website, and it can be difficult to ensure complete confidentiality and anonymity for children and adults who report violence.

Moreover, there are a number of deeper and potentially unsettling questions around power dynamics, processes, and politics.[69] Online reporting and mapping generate 'open data', and yet this data is not always available to the community it aims to serve for a variety of technical, sociocultural, or economic reasons. One opportunity for "informational empowerment" is to couple data collection with data provision.[70]

Mobile research and survey tools

Whilst data collection may be a useful by product of helplines and reporting mechanisms for children, it is one of the primary objectives of social science research studies. Now field researchers – from ethnographers to epidemiologists – can use mobile or digital research tools to integrate data collection, transmission, storage and retrieval. In addition to SMS-based data collection there are adaptive technologies that leverage existing features available on smartphones or tablets. So whether conducting scientific surveys of a large or small sample, or performing monitoring and evaluation of an aid program, or even collecting a simple opinion poll, these low-cost and flexible tools will generate results faster, cheaper, and more accurately than ever before.

A recent UN study in six countries of the Asia Pacific (Bangladesh, Cambodia, China, Indonesia, Sri Lanka and Papua New Guinea) employed personal digital assistants (PDAs) for the most sensitive questions on the perpetration of sexual violence and criminal activities. With this technology, the questions became self-administered using audio-enhanced functions for confidentiality reasons and to avoid any potential ethical issues arising in relation to obligations to report criminal behavior to the police.[71]

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[67] *See http://spatialcollective.com and http://spatialcollective.com/portfolio/visualizing-child-friendly-schools/.*

[68] *See Frilander et al (2014).*

[69] *See Rafttree and Nkie (2011) for an overview of the issues.*

[70] *The "Proteja Brasil" mobile app, for example, allows anyone to report violence against children whilst also providing information on relevant services in the neighborhood. The app pins the services on a map along with contact details and suggested routes to get there: http://www. protejabrasil.com.br/br/.*

[71] *See UN Women (2014).*

Open Data Kit (ODK) is an example of a free and open-source set of tools that can help organizations design, field, and manage mobile data collection solutions.[72] ODK provides a tool for users to build data collection surveys, collect the data on a mobile device and send it to a server, and finally aggregate the data and extract it in useful formats. Based on ODK, KoBoToolbox provides an integrated suite of applications for handheld digital data collection. The latest version to be launched in late 2014, reflecting close collaboration between the United Nations and the International Rescue Committee, as well as many other organizations, with a view of being deployed in humanitarian emergencies. [73]

The Igarapé Institute is also developing a new smartphone-based app to identify and help prevent VAC in Brazil and other settings. It is based on ODK and the concept that children's perceptions of security matters.[74] With support from Google and the Bernard van Leer Foundation, the Child Security Index (CSI) consists of an open source application designed to track children's perceptions and experiences of violence.[75] The app consists of roughly 30 basic questions that assess risk, exposure and protective factors. It documents how young people experience security in their home, at school, and in their communities. Information is safely stored and visualized on an online platform showing patterns and trends. Between 2014 and 2016, the Institute is working with partners in Recife, Rio de Janeiro, and São Paulo and up to 40 more cities in Brazil to track the dynamics of violence against children and identify evidence-based solutions to prevent it.[76]

There are several advantages of digital research tools over traditional pen and paper approaches. These include the ease and speed of data collection (and therefore cost-effectiveness), to the existence of built-in mechanisms to prevent error (e.g. ranges, skips etc.), automated mapping features, and their near-real time data transmission. The rapid generation of data can help governments, aid agencies and first responders better apprehend the spatial and temporal character of VAC, its risks and impacts. Such data can help institutions target and prioritize their limited resources for maximum benefit within short time frames.

And yet despite all the progress and potential, it is essential to acknowledge that digital data collection and fly-over mapping can and should never replace the richness of qualitative and participatory research. Mobile phones have limited storage capabilities and the focus of most data collection ICTs continues to be on quantifiable metrics. These new tools, while offering huge potential in getting to grips with VAC, should where possible be supplemented by qualitative research methods including local interpretation of research findings. Abuse, neglect, maltreatment, harassment are all incredibly sensitive and culturally complex issues that are not easy to talk about, let alone digitally map.

Igarapé team has been testing ICT use with children in low-income areas of Recife with great results

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[72] *See http://opendatakit.org/.*

[73] *See http://www.kobotoolbox.org/.*

[74] *See Moestue and Muggah (2012) and Muggah and Giannini(2014).*

[75] *See http://pt.igarape.org.br/child-security-index/.*

[76] *See http://pt.igarape.org.br/child-security-index/ as well as Muggah and Giannini (2014).*

Big data

Good information is the cornerstone of effective policy. While not a panacea, the use of new technologies can play an important role in the development of targeted and cost-effective solutions.The last 5-10 years have seen enormous changes to the way in which data are collected and used to generate information. The term "big data" is now used to describe the exponential increase in the volume and speed of information generation, leading to datasets that are so large and complex that they require new forms of management and processing systems.[77]

Crucially, big data research is no longer in the hands of the academics but also activists, practitioners and laypeople. Real time and relevant, the potential of big data is seen to be immense, ranging from predictive analytics, early warning, rapid response and even longer-term interventions to redress structural drivers of violence and instability. What is more, correlates and causal findings generated from Big Data can improve the targeting and evaluation of relief and development interventions undertaken by large and small organizations. There are also opportunities for it to be applied in assessing patterns and trends of VAC and possible solutions to target hot spots and hot people. That said, solid experience and evaluations are still in short supply.[78]

Google recently launched the Global Human Trafficking Hotline Network. As noted above, hotlines are an especially powerful tool for connecting victims to resources, and conveniently lend themselves to big data analysis.[79] And while there are dozens of independent helplines or hotlines worldwide, trafficking is a global issue that requires better cross-border coordination. In this far-reaching project, Google is linking local, regional and national anti-trafficking helplines across the globe in a data-driven network, with the aim of disrupting the web of human trafficking, including the trafficking of minors. Analysis of helpline datasets such as this is well positioned to log incidences of victimization as well as map out distribution of aid resources and services. By following up on cases,one can probe into the bigger child protection ecosystem to understand where needs are met and where they are not. At a strategic level then, helpline data analysis can identify vulnerable populations and help policymakers prioritize responses.[80]

New technologies and visualizations are now part of our social landscape. They can and are being used around the world to expand awareness of, and response to, violence against children.

Photo: Rafal Olechowski iStock

[77] *See O'Reilly (2012), Mayer-Schönberger and Cukier (2013) and Mancini (2013).*
[78] *See Mancini (2013).*
[79] *See http://www.google.com/ideas/projects/human-trafficking-hotline-network/.*
[80] *See, for example, CHI (2014, 2013 and 2012).*

Tech-driven campaigning and sharing

Current social media tools and data fusion centers, whether Twitter, Facebook, YouTube, or blogs and virtual knowledge centers[81], allow ideas to spread fast through networks. They are means of conveying a range of concerns and sounding the alarm for campaigns and social movements. Prominent examples include #EndViolence, #OneBillionRising, #BringBackOurGirls and #YesAllWomen, though there are many more.[82] With the power to rally hundreds, thousands, or even millions of people to unite and take action, new media and technology can make it impossible to ignore the problem of violence – especially VAC.

International aid agencies are taking advantage of digital marketing and social media strategies to improve their performance and launch campaigns. For example, Global Changemakers, a global network of 1,000 young social activists would simply cease to function without the Internet.[83] They use cascade training through online toolkits and communication is made possible through Skype chats and hangouts. In a similar vein, UNICEF's Voices of Youth Citizen project empowers children and youth to use ICT and spread their messages through video.[84] Results and lessons are being shared in real time on online forums, such as the UNICEF Innovation site, ICT Works, Technology Salon, Tech Change and the 'Wait… What?' blog.[85]

In addition the Internet, SMS can be used to collect inputs from children and youth *en masse*. In Nepal for example, UNICEF teamed up with a local radio station for youth and launched a campaign that allows young listeners to take an active role in a conversation, all via SMS.[86] Agencies can also target SMS campaigns at vulnerable groups with specific messages in local languages, often giving the option to provide feedback free of charge. Such SMS campaigning offers an easy and cost-effective way of reaching a large number of people, the drawback being that someone has to collect the phone numbers onto a database and keep it updated [87] and there remain challenges to text messaging in low-literacy populations.[88]

Cellphones are easily accessible and their use is now widespread in most parts of the world. Photo: World Bank

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[81] See for example http://xchange.futureswithoutviolence.org/library.

[82] There are even campaigns on the use of ICT for violence prevention itself, such as 'Take back the Tech' for gender violence prevention. See http://takebackthetech.net.

[83] For example, Global Changemakers created and shared online their new social media toolkit to help other youth get engaged and speak out. See Jaeger (2013).

[84] See http://www.voicesofyouth.org/citizens. Similarly, UN Women provide guidance on e-campaigning against violence against women and girls: https://www.youtube.com/watch?v=5zcPa02gZIs&list=PLD2C18A5CF84556D4&index=3.

[85] See http://unicefinnovation.org, http://www.ictworks.org/, http://technologysalon.org/, http://techchange.org/ and http://lindaraftree.com/.

[86] For more consult http://mobileactive.org/case-studies/voices-youth.

[87] See UNICEF (2011a).

[88] See Agoada (2014).

INTER-DISCIPLINARY INNOVATION

Contributions to the debate are emerging from across a host of disciplines and the many interactions between them.[89] In recent years aid specialists are increasingly turning to software engineers and programmers to identify new and novel solutions to reach their respective goals, be it protecting children from abuse and neglect (child protection), saving lives and alleviating suffering during a disaster (humanitarian sector), creating safe and thriving communities (violence prevention) or reducing poverty (social development).[90]

Table 2 - Overview of key advances in the use of ICT for VAC prevention, by discipline in the Global South

| Type	Area	Focus	Examples
Child protection	Child protection experts are those working for governmental or non-governmental institutions that prevent and respond child abuse and neglect, and more broadly support family stability.	Developing a protective environment for children that balancing the risks of ICT with its opportunities; promoting child-centered approaches.	UNICEF promotes global innovation,designed award winning RapidSMS mobile app; Plan International's VAC project in Benin.[91]
Social development	Social development generally refers to the underlying changes in and factors that help a society realize its aims and objectives, including reducing violence.	Promoting the use of ICT for participatory, bottom-up community development (ICT4D, ICT4Peace, ICT4kids); urban poverty is a growing focus.	Map Kibera and the Spatial Collective in Kenya for community mapping; uReport in Uganda. [92]

[89] See Muggah and Meier (2013) and Muggah (2013).

[90] See Muggah and Kosslyn (2014).

[91] See http://unicefinnovation.org, www.rapidsms.org andhttps://plan-international.org/where-we-work/africa/benin/what-we-do/our-successes/mapping-violence-against-children-in-benin/.

[92] See http://mapkibera.org ,http://spatialcollective.com and http://www.unicef.org/infobycountry/uganda_62001.html.

[93] See http://www.rapidftr.comand http://www.kobotoolbox.org.

Table 2 - continuation

Type	Area	Focus	Examples
The humanitarian community	The international humanitarian community works to save lives, alleviate suffering, and maintain human dignity during and after a crisis.	Apply ICT for quick transmission of data and information even in destitute and unstable conditions, particularly for the protection of children.	Rapid FTR for family reunification; KoBo Toolbox. [93]
Public health	Public Health refers to the safety and wellbeing of entire populations. Drawing on a multi-disciplinary science base, public health professionals strive to provide services that benefit the largest number of people. Violence is treated as a preventable public health problem.	A broad appreciation of the role of ICT (e.g. mHealth) whilst its application for violence prevention is very new (e.g. m Violence Prevention)	There's an absence of solid public health examples on the use of ICT for VAC prevention in the global South.
Violence prevention and peace-building	Experts on peace building, state building and security and armed violence prevention and reduction, appreciating role of ICT to achieve its goals.	More focused on youth than children, this sector tends to centeron community violence (rather than child maltreatment in the home or school)	Child Security Index in Brazil. [94]

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[93] See http://www.rapidftr.com and http://www.kobotoolbox.org.

[93] See http://pt.igarape.org.br/child-security-index/.

[93] See more on the Convention of the Rights of the Child (CRC): http://www.unicef.org/crc/files/Rights_overview.pdf.

Child Protection

Child protection experts are working for governmental or non-governmental institutions that prevent and respond child abuse and neglect, and more broadly support family stability and the realization of children's rights.[95] While considerable creativity and technical expertise is being fostered and funded by child protection agencies, it is essential to understand that, within this sector, ICT is very much regarded as double-edged.

Many of these same experts are deeply concerned about the risks generated by ICTs, be they cyber-bullying, online grooming, child pornography, or the sharing of violent YouTube videos and games. There is considerable confusion concerning new forms of communication, how to define them and the long-term implications for children. For example, "sexting" can refer to impulsive and harmless actions by youthful romantic partners but also to serious crimes that involve extortion and deliberate humiliation. Most recently, GPS trackers and mobile phone spyware is being used to stalk, harass and threaten women, as a new form of domestic abuse, with impacts on their children.[96]

The media tends to focus on unusual and extreme forms of violence and abuse, increasing anxiety that is not necessarily warranted. In fact, child protection experts are also the first to admit that the Internet and mobile phones are useful tools to reach out to children, spread messages, and shed light on abuses often kept hidden from view.[97] Given the complexities, the United Nations Special Representative on Violence against Children has called for the recognition of both challenges and opportunities associated with ICT [98] and others call for a new "global agenda for children's rights in the digital age" along with further research to ensure that policy is driven by knowledge rather than fear.[99]

For its part, UNICEF combines the provision of guidance on how to protect children from new risks with research and innovation on how to employ new technology for children's benefit. The agency published a report entitled Child Safety Online that examines the links between child abuse and ICT and suggests several ways to build a protective environment for children. At the same time, the agency has designed and applied the award-winning RapidSMS mobile tool, established a special website to encourage dialogue around ICTs, and launched a Child Friendly Technology Framework to help practitioners design appropriate technology projects. [100]

Importantly, child protection agencies are linking up with telecommunications companies to achieve their goals. In 2014, for example, the Telenor Group and UNICEF signed a five-year agreement to support the development of a range of mobile technology solutions that will help advance
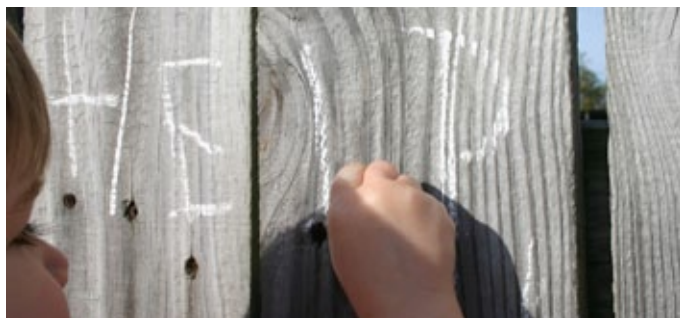
If they have the means, children will ask for help when they are in danger.
Photo: Irinas Creative Photo - iStock

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[95] See more on the Convention of the Rights of the Child (CRC): http://www.unicef.org/crc/files/Rights_overview.pdf.
[96] See http://www.theage.com.au/technology/technology-news/spywares-role-in-domestic-violence-20140321-358sj.html.
[97] See Kane and Portin(2007).
[98] See SRSG (2012).
[99] Livingstone and Bulger(2012) and Finkelhor(2011).
[100] See http://unicefinnovation.org/ and UNICEF (2013, 2011a, and 2011b).

children's rights.[101] Government and non-governmental agencies are modernizing and digitizing their way of working, be it creating online platforms for violence reporting and information sharing[102], or promoting their agendas through child-friendly websites, Facebook profiles, blogs or twitter, thereby enabling them to reach out the broader community to spread the word and expand their advocacy.[103]

Social Development

There is already considerable awareness and appetite for the application of new technologies to improve livelihoods and sustainable development. The term ICD4Dand ICT4peace are terms frequently applied with reference to the application of information and communication technologies for development and peace building. And more recently we are seeing the offshoot ICT4Kids, reflecting an appreciation for the need for ICT for child-friendly development. International non-governmental organizations, such as Save the Children and Plan International as well as UNICEF are gathering substantial expertise in the application of ICT for social development and child protection.[104]

The links between urban poverty reduction and violence prevention is an increasing focus among social development experts.[105] According to the UN Population Fund, UNICEF and other agencies, half the world's people – including over one billion children – already live in cities and towns. By 2030 it is projected that the majority of the world's children will grow up in urban areas (especially in the South), yet infrastructure and services are not keeping pace with population growth, thereby putting the most vulnerable populations at risk of violence, exploitation, disease and disasters.[106]

In poor, urban areas, girls and women may face different challenges to men and boys, are often are high risk of sexual abuse.[107] Although reported cases reflect only a fraction of actual occurrences, official data from Rio de Janeiro in Brazil in 2012 show that compared to 2011, there was a sharp 24 per cent increase in cases of estupro (crimes which include rape and other violence) reported to the police. In response, UN Women, UNICEF and UN-Habitat launched an online website which also works as a smartphone app that brings together information on support services for women and girls who are survivors of violence. [108]

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[101] See http://origin-www.unicef.org/media/media_72675.html.

[102] See for example the Turkish website http://www.cocukhaklariizleme.org/harita/. This "Child Rights Monitoring and Reporting Website", established in 2007 with support from the European Union, provides information on all aspects of children's rights in Turkey through media reports, literature and good practices.

[103] Blogs are often created informally by experts: Linda Raftree's (www.lindaraftree.com) is a core resource on the use of ICT for community development, including the prevention of VAC.

[104] See Bazan(2011), Beardon (2010), Hallow et al (2012), and UNICEF (2013).

[105] See for example Beardon (2010), Muggah (2012), Muggah and Diniz (2013), and UNICEF (2013). Also, an event co-hosted by UNICEF and ICT Works at the Technology Salon in New York, offered a space in 2012 to discuss some of the key challenges and good practice related to working with children, youth and urban communities, and explored the potential role of ICTs in addressing issues around urban poverty. See: http://us1.campaign-archive1.com/?u=e4459b3b23139d81a6c335119&id=e64953b8c9.

[106] See UNICEF (2012a) and Plan International (2010).

[107] See Plan International (2010) for a good overview of the issues.

[108] See http://www.unwomen.org/ca/news/stories/2013/6/rio-de-janeiro-apps-to-end-violence-in-favelas#edn1.

And while urban povertyand urban violencehave long been topics of study, there is a relative silence in relation to the interaction between them, especially the effectiveness of interventions designed to mitigate and reduce insecurity in medium- and lower-income cities.[109] Particularly poorly understood is the use of ICT to make cities safer for children, even the very young, although we can expect positivelessons from Brazil (Rio de Janeiro) and Kenya (Kibera) to trigger debate and innovation, so urgently needed on this issue.[110]

The Humanitarian Community

Even more innovation in the deployment of technology solutions is emerging from the humanitarian space. People working on the ground during emergencies or conflicts are increasingly turning to ICTs to provide aid and help rebuild families and communities. Basic mobile phones are playing a strategic role in the delivery of rapid, cost-effective, scalable humanitarian assistance, because even the poorest and most destitute people often have some form of access to mobile phones.

No longer is relief work the preserve of a select few heavyweight agencies. Rather, virtual networks of tech-savvy volunteers are speedily mobilizing data in the wake of crises to connect survivors with services.[111] Crisis Commons, for example, is an online community that seeks to advance and support the use of open data and volunteer technology communities to catalyze innovation in crisis management and global development.[112] Andnew collaborations are emerging. In Aceh and Haiti aid agencies are teaming up with telecommunications operators to distribute mass messages and channel remittances to at-risk groups during times of emergency.[113] Now Save the Children is joining forces with Vodafone to develop cash transfer systems using mobile phone technology.[114]

There are many types of new initiatives, largely focused on the quick transfer of information or cash. New social media platforms like AIDR[115] and MicroMappers[116] are designed to manage information surges during disasters and better support relief operations on the ground. Meanwhile the forthcoming version KoBo Toolbox[117] created by the Harvard Humanitarian Initiative is tailored to emergencies by being able to work offline in a

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[109] *See Muggah (2012) for a comprehensive review.*

[110] *See UNICEF and ICT Works co-hosted an even at the Technology Salon in 2012. The event raised a lot of questions around ethics, accountability and participation: http://us1.campaign-archive1.com/?u=e4459b3b23139d81a6c335119&id=e64953b8c9.*

[111] *See Muggah and Meier (2013).*

[112] *See http://crisiscommons.org.*

[113] *See Muggah(2013), Muggah and Meier (2012), Muggah and Giannini (2014).*

[114] *See Hallow et al (2012).*

[115] *See http://irevolution.net/2013/10/01/aidr-artificial-intelligence-for-disaster-response/.*

[116] *See http://www.theguardian.com/global-development-professionals-network/2013/oct/08/social-media-microtasking-disaster-response?CMP=twt_gu.*

[117] *The Harvard Humanitarian Intiiative is developing Kobo Toolbox's newest version in collaboration with the United Nations Office for the Coordination of Humanitarian Affairs and the International Rescue Committee is designed for crisis situations. See http://www.kobotoolbox.org/ updates/2013/11/new-kobotoolbox-will-target-humanitarian-disasters.*

remote field setting as well as online with multiple users in different locations. Noted above, the RapidFTR mobile app relies on the sharing of photographs to reunite children with their families, such a common tragedy during natural disasters or armed conflict.[118] And new digitized cash transfer mechanisms are widely deployed to give survivors easier access to credit.[119] Even recharging batteries is places with poor electricity is now becoming possible through solar power and portable energy sources, thereby amping up the potential of mobile technology in emergencies.

Public Health

The purpose of public health is to improve the safety and wellbeing of entire populations. Violence negatively affects the health of victims as well as those who witness violence, it acts like an epidemic disease, and it can be effectively prevented using health methods.[120] For this reason the public health approach to violence prevention focuses heavily on addressing underlying risk factors, including lack of parent–child attachment, family breakdown, the abuse of alcohol or drugs, and access to firearms.

The use of ICT is hardly new to public health. In factm Health has long been around, referring to "mobile health" or the practice of medicine and public health supported by mobile devices. Examples include virtual home visits, remote care and monitoring of chronic diseases, as well as educational apps to engage the public in wellness and prevention[121] or digital learning for medical professionals.[122]

The term mPreventViolence emerged in 2011 after the name of a landmark workshop hosted by the Institute of Medicine in Washington December 2012. It featured interesting case studies from the high-income countries highlighting successes in adding mobile components to parenting projects and the analysis of big data to detect risks and patterns of suicide. Unfortunately the workshop also revealed an absence of rigorous assessments from the South.[123] The youth health tech (YTH) project from the US is an example of how the advancement of technologies is being promoted to help young people access reliable information, have their voices heard and live lives without shame or fear. With a strong focus on violence prevention, there is great potential for global replication of YTH.[124]

Special interfaces and grafic designs that appeal to children can be used to facilitate the use of ICT for their protection.
Photo: Ben Lucier

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[118] *http://www.rapidftr.com.*

[119] *See Hallow et al (2013) and UNICEF (2011a).*

[120] *See CureViolence: http://cureviolence.org. See Dahlberg and Krug (2002) for more on the public health approach.*

[121] *See Greenspun and Coughlin (2012). Also The MIT Media Lab just launched a wellness initiative designed to spark innovation in the area of health and wellbeing, and to promote healthier workplace and lifestyle behaviors. Interesting work has also been done on Sexually Transmitted Diseases in this regard.*

[122] *OPENpediatrics is an example of a web-based digital learning platform designed for physicians and nurses who care for critically ill children worldwide, offering peer-to-peer interactivity and guided learning through video and multimedia. See http://openpediatrics.org.*

[123] *Although some examples of cross-border transfers were noted such as Text4baby (US) now being rolled out in Russia. See IOM and NRC (2013).*

[124] *See http://yth.org/.*

Violence Prevention and Peace Building

Within the field of violence prevention and peace building, there is a strong appreciation of the recent advances in geographic information systems, website development and ICT for monitoring and mapping of population dispersals, troop movements, and mass violence patterns.[125] Examples of these new virtual mechanisms for collaborative conflict prevention and digital witnessing include satellite maps, big data scraping systems, crowd mapping, as well as social media, blogs, wikis, and citizen journalism.[126]

Local peace builders are using these tools to bring new voices to the public domain. In the Congo, War Child UK is linking together a child helpline, an SMS reporting system and a digital map to show in real time where the worst cases of rape cases are happening.[127] In Lebanon, Search for Common Ground ran a video competition that asked Lebanese youth to 'Shoot [their] Identity'.[128] Videos showcasing a diversity of experiences were posted online, with a prize awarded to the best video.

In Brazil, young radio reporters run "good news stories" with the aim to unite youngsters living in different communities in the city of Recife where gang violence is rife.[129] In Rio de Janeiro, the Igarapé Institute's Child Security Index is mobile app deliberately designed for rapid assessments in unstable settings, enabling the quick collection and visualization of the views of children themselves, as young as 8 years old, on security and safety in their day-to-day lives.[130]

The fact is that working with children in high-violence areas brings specific challenges.Indeed, the tools frequently deployed to undertake assessments are blunt. For instance, household survey-based attempts to gather data on children in conflict and fragile settings regularly fail to capture the situation of children not living with their families. Children are often separated from their families either as refugees, displaced, disappeared, or in the ranks of armies and insurgency groups. What is more, these children register specific vulnerabilities that require careful, and ethically grounded, attention.[131]

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[125] *A thorough review commissioned by the Department for International Development (UK) explores the application of full range of ICT-based mechanisms to monitor and evaluate, including measure and disseminate, results of peacebuilding programs (Corlazzoli 2014). Also see Larrauri (2014) and Muggah (2014).*

[126] *The ICT4Peace Foundation catalogues existing ICT tools and mechanisms geared towards conflict early warning, mitigation, transformation and post-conflict recovery – see their wiki. Also the 2015 Build Peace conference will continue the exploration of how technology is resulting in the creation of alternative intrastructures for peace. See http://howtobuildpeace.org/blog/jenwelch1/.*

[127] *See War Child UK's video about the project here: http://youtu.be/RZdimyy0Bw8. Similar sexual violence mapping is happening in other conflict-affected areas, such as Syria where, Women under Siege are using the crowd-mapping initiative by Ushahidi to collect the personal experiences and secondhand reports of the sexualized violence against women and girls http://www.womenundersiegeproject.org/ and http://www.ushahidi.com/blog/2012/07/18/women-under-siege-mapping-sexualized-violence-in-syria/.*

[128] *See https://www.youtube.com/playlist?list=PL9jx1I-zkrhCn0IcGULFEk1XkNGwCqR__.*

[129] *For more on the Favela News project in Recife see Shaw (2007), da Silva and Shaw (2011) and Shine a Light (2011) and its website http://www.favelanews.org.*

[130] *See http://pt.igarape.org.br/child-security-index/.*

[131] *See Moestue and Muggah (2012).*

Technology is therefore not the panacea. There are a range of inherent tensions and ethical dilemmas that come with the use of new technologies in fragile, poor or conflict-affected settings. For example, new technologies can themselves be used to perpetrate organized violence. Researchers have already found that mobile phone coverage can generate negative externalities, including facilitating violent collective action, underlining the importance of encryption and anonymity in today's war zones.[132]

Next steps

New technologies, when used strategically and appropriately, can promote the principles of inclusion, empowerment and participation of children and youth. They can amplify their and others efforts to prevent violence against children, including in poor and unstable settings. Alongside helplines and digitalized protection systems which serve important and functional purposes are also new digital research tools, online citizen reporting and crowd mapping.

By breaking down traditional barriers to violence reporting and evidence generation, ICTs can contribute to the achievement of the six steps put forward by UNICEF to prevent and respond to the problem:[133]

1.   **Implementing laws and policies that protect children.** Specifically, investments in appropriate policies and legislation, along with institutional codes of conduct. Tech-driven information sharing is speeding up communication and expanding the scale and impact of anti-violence campaigns.

2.   **Carrying out data collection and research.** Effective advocacy and programming are grounded in solid evidence. Big data analysis, digital research tools and citizen reporting and crowd mapping, are all means to which new data are being generated and visualized in increasingly innovating and sophisticated ways.

3.   **Supporting parents, caregivers and families.** Providing parents with child-rearing strategies and techniques, as well as economic support, can help mitigate children's risk of physical abuse. Educational apps, online help and discussion forums, helplines, virtual home visits and remote monitoring of at-risk families, are all ways in which ICTs can promote positive and non-violent parenting.

4.   **Helping children and adolescents manage risks and challenges.** Poverty and inequality, difficulties in school, low self-esteem and self-discipline, and lack of information on where to get help can increase a child's vulnerability to violence. Helplines, online information and discussion, coupled with the near universal access to mobile phones, provides new ways in which children and youth can seek help and advice on any issue, even taboo subjects such as sexual abuse.

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[132] *A Governments and non-state groups are also reliant on communications to coordinate and monitor potential targets. Security forces, rebel groups and militia can and do intercept messages (Muggah 2014)*
[133] *See UNICEF (2014a).*

5.   **Changing attitudes and social norms that encourage violence and discrimination.** Deeply engrained attitudes and social norms can shift through school and community programs that engage influential, trusted individuals as agents of change, complemented with evidence-based mass media and social mobilization campaigns. ICT can empower children and youth to have their voices heard, and engage in local to global campaigns to change attitudes and behavior around abuse, neglect, prejudice and injustices.

6.   **Providing and promoting support services for children.** Services include counseling; information and referrals for other protection services offered through the police, doctors, social welfare workers and assistance. Helplines, websites, and mobile maps and apps can refer children to nearest services, and even enable denouncements and reporting of harm at these services.

This Strategic Paper demonstrates that different sectors and disciplines are starting to adopt and apply similar ICT tools to prevent VAC. There is some evidence of their being tried and tested (albeit at relatively small scale) across the Americas, Africa and Asia. However, to generate impact at scale and be sustainable, these initiatives demand more resources, robust evaluation, and extensive communication of success (and failure). Whilst technology will never fully resolve the problem of violence against children, ICTs are already going a long way to changing how society conceives and engages the problem.

REFERENCES

Agoada, J. 2014. "Informing the World's Illiterate through a Mobile Device", *Huffington Post.* 2 September. http://www.huffingtonpost.com/joseph-agoada/informing-the-worlds-illi_b_5738862.html

Bazan, C. 2011. *Using Child Helplines to Protect Children from School Violence*. Plan International and Child Helplines International. http://www.childhelplineinternational.org/media/55116/learn_without_fear_-_chi-plan_report_-_final_document.pdf

Beardon, H. 2010. *ICT Enabled Development: Using ICT Strategically to Support Plan's Work.* Plan International. http://www.plan-academy.org/assets/ICT+Enabled+Development+Plan+2010.pdf

Berlin, L.J., Appleyard, K. and Dodge, K.A. 2011. "Intergenerational Continuity in Child Maltreatment: Mediating Mechanisms and Implications for Prevention" *Child Development* 82 (1): pp. 162-76. http://www.ncbi.nlm.nih.gov/pubmed/21291435

Callaway, E. 2013. "Fearful Memories haunt Mouse Descendants Genetic Imprint from Traumatic Experiences carries through at least two Generations" *Nature*. 2013 site.http://www.nature.com/news/fearful-memories-haunt-mouse-descendants-1.14272

Cicchetti, D. and Rizley, R. 1981. "Developmental Perspectives on the Etiology, Intergenerational Transmission, and Sequelae of Child Maltreatment" *New Directions for Child and Adolescent Development* 11: pp. 31-55. http://onlinelibrary.wiley.com/doi/10.1002/cd.23219811104/abstract

Chambers, R. 2005. *Participatory Mapping for Change.* Mapping for Change International Conference, Nairobi: 7-10 September. ftp://ftp.itc.nl/pub/pgis/PGIS%20Articles/Participatory%20Mapping%20for%20Change.pdf

Chambers, R. 2007. '*Who Counts? The Quiet Revolution of Participation and Numbers*' IDS Research Summary of IDS Working Paper 296. Surrey: Institute of Development Studies. http://www.ntd.co.uk/idsbookshop/details.asp?id=1006

Child Helpline International (CHI). 2012. *Child Impact Assessment Manual.* Amsterdam: CHI. http://www.childhelplineinternational.org/media/41265/chi_child_impact_assessment_manual.pdf

CHI. 2013. R*ewind – the Voices of Children and Young People.* Amsterdam: CHI. http://www.childhelplineinternational.org/media/76642/chi_global_web.pdf

CHI. 2014. *Annual Report 2013.* Amsterdam: CHI. http://www.childhelplineinternational.org/media/84364/chi_annual_report_2013.pdf

Corlazzoli, V. 2014. *ICTs for Monitoring & Evaluation of Peacebuilding Programs.* Search for Common Ground. https://www.sfcg.org/wp-content/uploads/2014/05/CCVRI-SSP-_ICT-and-ME-_Final.pdf

Dahlberg, L,L, and Krug, E.G. 2002. Violence-a Global Public Health Problem. Krug, E., Dahlberg, L.L., Mercy, J.A., Zwi, A.B., Lozano, R., Eds. *World Report on Violence and Health.* Geneva: World Health Organization. Geneva: WHO. pp. 1-56. http://whqlibdoc.who.int/publications/2002/9241545615_chap1_eng.pdf

Finkelhor, D. 2011. *The Internet, Youth Safety and the Problem of "Juvenoia"*. Durham: Crimes against Children Research Center. http://www.unh.edu/ccrc/pdf/Juvenoia paper.pdf

Frilander, M., Lundine, J., Kutalek, D. and Likaka, L. 2014. *New Technologies for Improving Old Public Security Challenges in Nairobi*. Strategic Note 15. http://igarape.org.br/new-technologies-for-improving-old-public-security-challenges-in-nairobi/

Gilpin, L. 2014. *Can Tech Help Prevent Violence against Women? These Tools Say 'Yes'.* Tech Republic.http://www.techrepublic.com/article/can-tech-help-prevent-violence-against-women-these-tools-say-yes/

Greenspun, H. and Coughlin, S. 2012. *Health in an mWorld - How Mobile Technology is Transforming Health Care.* Deloitte. http://www.deloitte.com/assets/Dcom-UnitedStates/LocalAssets/Documents/us_chs_2012_mhealth_HowMobileTechnologyIsTransformingHealthCare_032213.pdf

Hallow, D., Mitchell, J., Gladwell, C. and Aggiss, R. 2012. *Mobile Technology in Emergencies: Efficient Cash Transfer Mechanisms and Effective Two-Way Communication with Disaster-affected Communities using Mobile Phone Technology.* Save the Children and Vodafone Foundation. London: Save the Children. http://www.vodafone.com/content/dam/mobileforgoodsummit/reports/mobile_technology_inemergencies.pdf

Hoeffler, A. and Fearon, J. 2014. *Benefits and Costs of the Conflict and Violence Targets for the Post-2015 Development Agenda.* Conflict and Violence Assessment Paper. The Copenhagen Consensus. http://www.copenhagenconsensus.com/sites/default/files/conflict_assessment_-_hoeffler_and_fearon_0.pdf

Institute of Medicine (IOM) and the National Research Council (NRC). 2012. *Communications and Technology for Violence Prevention.* Workshop Summary. Washington, DC: The National Academies Press. https://irevolution.files.wordpress.com/2012/06/tech-violence-prevention-blog-link.pdf

Jaeger, G. 2013. "By Youth, for Youth" *Stanford Social Innovation Review.* Fall 2013. http://www.ssireview.org/articles/entry/by_youth_for_youth

Kane, J. and Portin, P. 2007. *Violence and Technology.* Brussels: Daphne program, European Commission http://ec.europa.eu/justice_home/daphnetoolkit/files/others/booklets/07_daphne_booklet_7_en.pdf

Kenny, C. 2014. "Why Apple's New Phones Won't Change the World but Nokia's will" *Bloomberg Business* Week. September 19, 2014. http://www.businessweek.com/articles/2014-09-19/why-apples-new-phones-wont-change-the-world-but-nokias-will

Larrauri, H.P. 2014. "Breaking the Cycle of Violence: Technology can bring Hope for Peace" *The Guardian*. 21 July. http://www.theguardian.com/global-development-professionals-network/2014/jul/21/technology-conflict-resolution-israel-palestine?CMP=twt_gu

Livingstone, S. and Bulger, M.E. 2012. *A Global Agenda for Children's Rights in the Digital Age*. Florence: UNICEF. http://www.unicef-irc.org/publications/pdf/lse%20olol%20final3.pdf

Livingstone, S. and Helsper, E. 2007. "Taking Risks when Communicating on the Internet: the Role of Offline Social-Psychological Factors in Young People's Vulnerability to Online Risks" *Information, Communication and Society* 10 (5): pp. 619-643. http://eprints.lse.ac.uk/4254/1/Taking_risks_when_communicating_on_the_internet_(LSERO_version).pdf

Mancini, F. Ed. 2013. *New Technology and the Prevention of Violence and Conflict.* New York: International Peace Institute.

Mancini, F. and O'Reilly, M. 2013. "New Technology and the Prevention of Violence and Conflict" *Stability*: *International Journal of Security and Development* 2 (3): 55 DOI: http://dx.doi.org/10.5334/sta.cp

Mayer-Schönberger, V. and Cukier, K. 2013. *Big Data*: *a Revolution that Will Transform How We Live, Work, and Think.* Boston: Houghton Mifflin Harcourt.

Mental Health Helpline Partnership (MHHP). 2007. *Confidentiality Good Practice Guidelines.* 2nd edition. London: Telephone Helplines Association. http://www.helplines.org/uploads/1/1/2/5/11258169/mhhp_confidentiality_guidelines_2nd_edition.pdf

Moestue, H. and Muggah, R. 2012. "Preventing Violence Against Children in Fragile and Conflict-affected Settings: a "Child Security Index" *Early Childhood Matters*, November 2012. http://igarape.org.br/preventing-violence-against-children-in-fragile-and-conflict-affected-settings-a-child-security-index/

Muggah, R. 2012. *Researching the Urban Dilemma: Urbanization, Poverty and Violence.* Ottawa: International Development Research Centre. http://www.idrc.ca/EN/PublishingImages/Researching-the-Urban-Dilemma-Baseline-study.pdf

Muggah, R. 2013. "Wired Humanitarianism" *Huffington Post.* 18 Nov 2013. http://www.huffingtonpost.com/robert-muggah/wired-humanitarianism_b_4293893

Muggah, R. 2014. "Today's Digital Witnesses can Prevent Tomorrow's War Crimes". *Open Canada.* 14 April. http://opencanada.org/features/the-think-tank/comments/todays-digital-witnesses-can-prevent-tomorrows-war-crimes/

Muggah, R. and Diniz, G.M. 2013. "Digitally Enhanced Violence Prevention in the Americas" *Stability: International Journal of Security and Development* 2 (3): 57, DOI: http://dx.doi.org/10.5334/sta.cq

Muggah, R. and Giannini, R. 2014. "Using New Technology to Give Voice to the Voiceless" *Huffington Post.* 1 May. http://www.huffingtonpost.com/robert-muggah/using-new-technology-youth-violence_b_5243106.html

Muggah, R. and Kosslyn, J. 2014. "What Next for Foreign Policy Think Tanks", *Huffington Post*. 3 September. http://www.huffingtonpost.com/robert-muggah/what-next-for-foreign-pol_b_5762832.html

Muggah, R. and Meier, P. 2013. "The Digital Humanitarians are Coming" *Relief Web* 9 December. http://reliefweb.int/report/world/digital-humanitarians-are-coming

O'Reilly, M. 2012. "Robert Kirkpatrick, Director of UN Global Pulse, on the Value of Big Data," *Global Observatory.* 5 November. www.theglobalobservatory.org/interviews/377-robert-kirkpatrick-director-of-un-global-pulse-on-the-value-of-big-data.html

Pinheiro, P.S. 2006. *World Report on Violence against Children.* Geneva: United Nations Secretary-General's Study on Violence Against Children. http://www.unicef.org/violencestudy/reports.html

Plan International. 2010. *Because I am a Girl: Digital and Urban Frontiers.* Plan International. http://plan-international.org/girls/pdfs/BIAAG_2010_EN2.pdf

Por Dentro da Cidade. 2011. "UNICEF, Massachussets Institute of Technology e Public Laboratory for Open Technology and Science transferem Tecnologia de Mapeamento de Riscos Ambientais para Comunidades Cariocas" *Boletim da Plataforma dos Centros Urbanos.* 13 September. Rio de Janeiro. http://www.unicef.org/brazil/pt/por_dentro11.pdf

Raftree, L. 2013. "The Ethics of Participatory Digital Mapping with Communities" *Wait…What!* 11 February. http://lindaraftree.com/2013/02/11/the-ethics-of-participatory-digital-mapping-with-communities/

Raftree, L. and Nkie, J. 2011. "Digital Mapping: a Silver Bullet for Enhancing Youth Participation in Governance?" *Participatory Learning and Action Journal*, London: International Institute for Environment and Development, December. http://pubs.iied.org/pdfs/G03192.pdf

Save the Children Alliance. 2004. *So You Want to Involve Children in Research? A Toolkit Supporting Children's Meaningful and Ethical Participation in Research Relating to Violence against Children.* London: Save the Children http://www.savethechildren.org.uk/resources/online-library/so-you-want-involve-children-research

Special Representative of the Secretary-General (SRSG). 2012. *Towards a World Free from Violence. Global Survey on Violence Against Children.* Office of the Special Representative of the Secretary-General on Violence against Children. New York: UN. http://srsg.violenceagainstchildren.org/sites/default/files/publications_final/toward_a_world_free_from_violence.pdf

SRSG. 2013. *Safe and Child-sensitive Counseling, Complaint and Reporting Mechanisms to Address Violence Against Children.* Joint report of the Special Representative of the Secretary-General on Violence Against Children and the Special Rapporteur on the Sale of Children, Child Prostitution and Child Pornography. New York: United Nations. http://srsg.violenceagainstchildren.org/sites/default/files/publications_final/web_safe_final.pdf

United Nations Global Initiative to Fight Human Trafficking (UNGIFT). 2008. "017 Workshop: Technology and Human Trafficking". The Vienna Forum to fight Human Trafficking 13-15 February. Vienna: Austria Center. http://www.unodc.org/documents/human-trafficking/2008/BP017TechnologyandHumanTrafficking.pdf

United Nations Children's Fund (UNICEF). 2011a. *Mobile Technologies for Child Protection.* A Briefing Note. Dakar: UNICEF West and Central Africa Region. http://www.unicef.org/wcaro/english/mobile_technologies_for_child_protection.pdf

UNICEF. 2011b. *Child Safety Online: Global Challenges and Strategies.* Florence: UNICEF Innocenti Research Centre. http://www.unicef-irc.org/publications/pdf/ict_eng.pdf

UNICEF. 2012a. *State of the World's Children: Children in the Urban World.* New York: UNICEF. http://www.unicef.org/sowc2012/pdfs/SOWC%202012-Main%20Report_EN_13Mar2012.pdf

UNICEF. 2012b. *A Passport to Protection. A Guide to Birth Registration Programming*. New York: UNICEF. http://www.unicef.org/protection/files/UNICEF_Birth_Registration_Handbook.pdf

UNICEF. 2013. *Children*, *ICT and Development: Capturing the Potential, Meeting the Challenges.* Innocenti Insight. Florence: UNICEF Office of Research. http://www.unicef-irc.org/publications/pdf/unicef_royalholloway_ict4dreport_final.pdf

UNICEF. 2014a. *Hidden in Plain Sight. A Statistical Analysis of Violence against Children.* New York: UNICEF. http://www.unicef.org/publications/files/Hidden_in_plain_sight_statistical_analysis_EN_3_Sept_2014.pdf

UNICEF. 2014b. "A Case for Case Management: a Case for Innovation in Technology". *UNICEF Stories*. 7 May. http://unicefstories.org/2014/05/07/a-case-for-case-management-a-case-for-innovation-in-technology/

UN Women. 2014. "In Cambodia, Social Causes Find new Partner in Technology". *UN Women News*. 16 May. http://www.unwomen.org/en/news/stories/2014/5/in-cambodia-social-causes-find-new-partner-in-technology#sthash.3aj755eK.dpuf

Valente, M. 2012. "Women have New Weapon Against Domestic Violence in Argentina". *IPS News*. 9 March. http://www.ipsnews.net/2012/03/women-have-new-weapon-against-domestic-violence-in-argentina/

World Health Organization (WHO). 2007. *WHO Ethical and Safety Recommendations for Researching, Documenting and Monitoring Sexual Violence in Emergencies*. Geneva: WHO. http://www.who.int/gender/documents/OMS_Ethics&Safety10Aug07.pdf

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