Title registration for a systematic review: The effectiveness of using information and communications technologies (ICT) for contributing to the prevention of, and response to, sexual and gender-based violence against women and children in low- and middle-income countries

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Title of the review

The effectiveness of using information and communications technologies (ICT) for contributing to the prevention of, and response to, sexual and gender-based violence against women and children in low- and middle-income countries: a systematic review

Background

The problem of sexual and gender-based violence (SGBV) against women and children (both girls and boys) is widespread globally, and particularly prevalent in low- and middle-income countries where stresses from economic and political pressures tend to be more exacerbated. MEASURE Evaluation 1, which maintains a key global database on SGBV, states “International studies and survey data confirm that SGBV is a widespread problem with serious repercussions in terms of personal suffering, health complications, disability, and death for women, children and men, in addition to having significant costs for healthcare systems and society at large (United States Agency for International Development (USAID), 2006; United Nations Population Fund (UNFPA)/AIDOS, 2003).”

While having complete accurate and timely data on the SGBV is still more of a goal than a reality, available country data indicates that between 15 and 76 percent of women are targeted for physical and/or sexual violence in their lifetime (World Health Organization et al 2013)3. Globally, up to 50% of sexual assaults are committed against girls under 16 (World Health Organization et al 2013). Global data estimates that in 2002 alone, 150 million girls under the age of 18 suffered some form of sexual violence (UN Women). In conflict contexts, SGBV prevalence skyrockets. In the case of eastern Democratic Republic of Congo, over 200,000 cases of sexual violence, predominantly against women and girls, have been documented since 1996 (UN Women). Boys are also subjected to sexual violence but reliable data of prevalence is lacking (UNICEF 2014, Radford et al 2015)4.

However, data collected in DRC indicate that the number of boys (in DRC) who have experienced

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1 Monitoring and Evaluation to ASeSS and Use Results. MEASURE Evaluation. MEASURE Evaluation is a cooperative agreement awarded by the U.S. Agency for International Development (USAID) to the Carolina Population Center at the University of North Carolina at Chapel Hill and five partner organizations: ICF International, John Snow Inc., Management Sciences for Health, Palladium, and Tulane University. MEASURE Evaluation works closely with USAID, its country missions and counterparts to improve collection, analysis and presentation of data to promote better use of data in planning, policy-making, managing, monitoring, and evaluating population, health, and nutrition programs, and such, maintains the SGBV subarea within its Family and Reproductive Health Indicators Database.


conflict related sexual violence ranges from 4% to 24% (depending upon the methodology used (UNICEF 2014)\textsuperscript{5}.

Concurrently, the proliferation of information and communication technologies (ICT), specifically the use of mobile phones and web-based communications technologies\textsuperscript{6}, to address multiple issues in low- and middle-income countries, has been increasing exponentially (World Bank 2016)\textsuperscript{7}. This trend toward increasing use of ICT carries over to young people with an average of 83% of young people aged 18-29 owning a mobile phone (Ippoliti & L’Engle 2017, citing Pew Research Center, 2014)\textsuperscript{8}. Evidence, supported by methodologically rigorous research, of the impact of using ICT in areas such as health, has indicated that if used properly, ICT can increase impact of interventions and address gaps and challenges inherent with the delivery of interventions. (World Bank 2012)\textsuperscript{9}.

Stakeholders working in the area of SGBV, such as the Sexual Violence Research Initiative (SVRI) and the World Bank, have recognized and acknowledged the increased use of ICT to both prevent and respond to sexual and gender-based violence globally (SVRI 2017\textsuperscript{10}, Hayes 2014, \textsuperscript{11}) but there are few, if any, attempts to take stock and systematically review the research and evidence of outcomes and impact attributable to using ICT for SGBV prevention or response generated by studies and rigorously documented best practices.

Policy relevance

Currently, a number of countries, including low- and middle-income countries (e.g., Bangladesh, Brazil, Nigeria, Tanzania, etc.) have enacted, or are considering enacting national “eHealth” (“e” = electronic = the use of ICT) policies, strategies, regulations or laws to broaden the coverage of ICT in health-related interventions. As part of, or related to, these national eHealth policies стратегий/ regulations/laws are national systematic approaches on using ICT to effectively collect, manage,
analyze and use accurate, timely and complete data to more effectively address health and health related issues. One of these health-related issues includes sexual and gender-based violence (SGBV).

Organizations such as United Nations Development Programme (UNDP), with assistance from the United Nations Entity for Gender Equality and the Empowerment of Women (UN Women), United Nations Population Fund (UNFPA), United Nations Children’s Fund (UNICEF) and others are supporting national partners to develop required legal and policy frameworks to combat SGBV.

Results from this Systematic Review could potentially inform these national policies and provide substantive evidence for including ICT as an effective tool to prevent and respond to SGBV.

**Objectives**

1) Does the use of ICT prevent SGBV against women and children in low- and middle-income countries?

2) Can ICT be used to improve access to services for SGBV survivors in low- and middle-income countries?

3) Does the use of ICT contribute to effectively achieving intermediate outcomes that lead to the prevention of SGBV against women and children, and/or improving access for SGBV survivors to response services in low- and middle-income countries?

In addition, we anticipate that the process conducting the Systematic Review will inform the development of a Conceptual Framework for analyzing how ICT-based interventions can be evaluated in preventing SGBV and improving access for SGBV survivors to SGBV services.

The research questions that will guide our systematic review and the development of our protocol will generally be categorized according to one or more of the following:

1) Target population;
2) Prevention or response (access to SGBV service)
3) Outcome area: i) knowledge; ii) attitude; iii) behaviour

**Research Questions**

1. Does the use of ICT contribute to changing social and cultural norms in potential perpetrators (men and boys) that contribute to violent attitudes and behaviours against women and children in low- and middle-income countries (e.g. in intimate partner relationships)?
2. Does the use of ICT contribute within communities to changing social and cultural norms underlying violent attitudes and behaviours against women and children in low- and middle-income countries?

3. Does the use of ICT increase knowledge of women and children about means and methods for reducing vulnerability and preventing being subject to SGBV?

4. Does the use of ICT increase knowledge of women and children about how and where to access SGBV services if they are survivors of SGBV?

5. Does the use of ICT increase knowledge within women and children resulting in an increase in access to SGBV services if they are survivors of SGBV?

6. Does the use of ICT increase knowledge and capacity of SGBV service workers for responding to SGBV (e.g. SGBV response protocols, referral networks, recognition of SGBV symptoms)?

7. Does the use of ICT change behaviours and attitudes in SGBV service providers? (Contributing to improved quality of SGBV services, e.g., better implementation of protocols, referrals; reduced stigmatization and discrimination toward SGBV survivors?)

8. Does the use of ICT contribute to improving SGBV service infrastructure (e.g., inventory and supply management)?

9. Does the use of ICT to improve SGBV service response capacity, capabilities infrastructure, worker attitudes, and/or processes result in greater access to SGBV services by SGBV survivors?

10. Can ICT be used for advocating and changing community attitudes toward SGBV resulting in laws and policies for SGBV prevention, and/or support for SGBV health and social services?

**Existing reviews**

The use of ICT may also be referred to as eHealth (electronic health), mHealth (specifically using mobile phones), or digital health (a catch-all category for all ICT-based health interventions).

While there are a number of systematic reviews identifying studies of mHealth, eHealth and digital health interventions for improving health outcomes, there are no systematic reviews identifying evidence around the use of ICT for outcomes related to SGBV against women and children in low- and middle-income nations.

Systematic reviews that address mHealth, eHealth and digital health address health outcomes in specific health technical areas such as HIV and maternal, newborn and child health. While there
are a number of systematic reviews addressing the evidence connected with preventing sexual and gender-based violence (SGBV), no systematic reviews specifically address using ICT as a prevention or response intervention strategy.

Accordingly, we believe that a systematic review that takes stock of the evidence connected with the operationalization and implementation of ICT for preventing and responding to SGBV is not only warranted, but critical for implementers in order to comply with the principle of “due no harm” when delivering interventions in potentially vulnerable contexts. We also hope that a systematic review on using ICT to contribute to SGBV prevention and response interventions for women and children in low- and middle-income nations will be a baseline and catalyst for future research and methodologically rigorous studies.

Illustrative examples of systematic reviews that address the use of ICT for some aspect of health.


The reviews, spanning a period between 2012 and 2018 address:

- Using ICT to facilitate social work (but do not include SGBV preventions and response)
- Using mobile phones to improve sexual and reproductive health (SRH) for youth, focusing primarily on accessing SRH information, but included access to counselors to answer questions on a variety of issues include gender-based violence. The review was limited to mobile phones and the target population was youth.
Other systematic reviews assessing the effectiveness of mHealth interventions and outcomes connected to in different health conditions including chronic disease management, coronary disease, weight reduction, HIV in low, medium and high income countries etc.. However, the reviews examined did not relate to outcomes pertaining to sexual and gender based violence against women and children using ICT on anti-bullying ICT-mediated interventions. Mobile text-messaging interventions designed for health improvement and behavior change. Reliability of using mobile phone technology on health projects in Africa. Effectiveness of mobile phone behavior change communication interventions in developing countries. The interventions health topics included HIV/AIDS, family planning and pregnancy.

None of the systematic reviews systematically using rigorous study protocols, address the use of ICT for achieving intermediate and primary prevention and/or response outcomes for SGBV against women and children.

### Intervention

#### Scope

We will identify both published and unpublished studies and grey literature that describe and evaluate the effectiveness of ICT to deliver interventions for the prevention of SGBV against women and children, and for responding to SGBV by improving survivors’ access to services.

The scope will also include using ICT to achieve intermediate outcomes that are part of causal pathways for 1) preventing SGBV against women and children in low- and middle-income countries; and 2) responding to SGBV by improving survivors’ access to services.

We will exclude the uses of ICT if they are not specifically and purposefully used to deliver or fill gaps in prevention and response interventions for sexual and gender-based violence. We will exclude literature that studies “technology-facilitated” SGBV.12

**Who delivers the intervention?**

The prevention and response interventions are typically delivered by non-governmental organizations, governments, or a collaboration of both that may also include universities. A separate technology partner, unless the NGO or government has the technological capacity, provides the technological input, coding the ICT tool whether it is a mobile phone application

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and/or web-based application, conducting a feasibility assessment (examining the conditions such as connectivity, usability, etc.), and delivering necessary training to the targeted users of the technology. The technologists work (or are supposed to work) hand-in-hand with the program specialists (e.g., child protection, gender, and SGBV specialists) to ensure the interventions supported by technology are appropriately deployed, and are most importantly, delivered in accordance with the “do no harm principle”.

Who are the targeted groups?

For the purpose of this systematic review, the primary targeted groups will be:

- Women in low- and middle-income countries
- Children in low- and middle-income countries

However, we will also be looking at interventions that target intermediary groups who are part of the causal pathway to preventing SGBV against women and children, and increasing access to SGBV services for SGBV women and children survivors including:

- Potential perpetrators (i.e. men and boys) in low- and middle-income countries
- Intimate partners in low- and middle-income countries
- Service workers (e.g., health, social, police) in low- and middle-income countries
- Communities in low- and middle-income countries

Causal pathways of included interventions

Different groups may be targeted as mediators (intermediaries) for achieving intermediate outcomes that contribute, or are assumed to contribute, to SGBV prevention and response outcomes. Interventions for the purpose of preventing or responding to violence may have the objective of achieving an intermediate outcome that is a prerequisite for achieving primary outcome of preventing SGBV against women or children, or responding to SGBV (i.e., facilitating access to services for survivors of SGBV). Often there is more than one intermediate outcome as part of a causal pathway leading to the primary outcome (i.e. SGBV prevention or improved access to SGBV services).

Accordingly, we will also be identifying studies that target and measure outcomes on other groups other than women and children. These other targeted groups or targeted “intermediary” groups include SGBV service providers (social workers, health providers, etc.), potential and actual SGBV perpetrators (including intimate partners,) and community members.

Very often it is difficult to measure primary prevention outcomes (i.e. reduced incidence of SGBV). Assumptions may be made that achieving an intermediate outcome will necessarily lead to the primary outcome whether it prevention (reduced SGBV prevalence), or response (greater access to services). We anticipate that many studies evaluate the effectiveness of an intervention in achieving an intermediate outcome, but take the study no further based on the assumption that the
intermediate outcome will lead to the primary outcome (e.g., SGBV prevention or improved access to SGBV services).

For example, changing male social norms is assumed to lead to the reduction of the incidence of violence against women and girls. We anticipate that studies will measure changed social norms exhibited by men and boys, but not necessarily empirical changes in SGBV incidence and prevalence against women and girls. Improving the capacity of social workers to recognize symptoms of SGBV and know the protocols for handling SGBV cases will lead to improved SGBV service response and access for SGBV survivors measured by some sort of service quality standard, but will not necessarily be measured by changes in numbers of survivors actually accessing services.

In summary, we will be targeting the following groups in low- and middle-income as subjects of the studies we identify for the systematic review:

- Women
- Children
- Potential perpetrators (i.e. men and boys)
- Intimate partners
- Service workers (e.g., health, social, police)
- Communities

13 “Intimate partners” include both women and perpetrators, but
*What sorts of interventions are delivered with support of ICT?*

The use of ICT is not necessarily the intervention itself, but a means to support the underlying intervention (e.g., tool for communicating messages connected with changing social norms for SGBV prevention), or to address obstacles and challenges in the delivery of an intervention (e.g., communicating essential information to hard-to-reach populations regarding locations of SGBV response services).

We will identify ICT supported interventions that have as an objective either 1) SGBV prevention; and/or SGBV response (improved access for SGBV survivors to services); or 2) an intermediary result that is part of the causal pathway to either SGBV prevention, or improved access for SGBV survivors to services.

We will attempt to identify only studies related to interventions if they are delivered using ICT, and describe the role that ICT in facilitating the delivery of the intervention. These studies may compare cohorts using ICT interventions with non-technology interventions, or with no-intervention at all.

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<tr>
<th>Illustrative Interventions</th>
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<tr>
<td><strong>Intervention Objective (Intermediary Result or Primary Outcome):</strong></td>
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<tr>
<td>Increase in knowledge of physical locations of high SGBV incidents to avoid.</td>
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<td>Mobile phone or web-based referrals to SGBV service providers (Intermediary)</td>
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<tr>
<td>Provide children access to SGBV counselling services (Primary) Prevent further violence to children (Intermediary)</td>
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<tr>
<td>Change social norms around violence between partners (Intermediary)</td>
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*Categories of interventions – conceptual frameworks for analysis*

Identifying different conceptual frameworks of categories for identifying and analysing interventions will also be used to search and identify the relevant literature. Some of these analytical intervention categories include:

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14 Intimate partner violence (IPV) is one of the most common forms of SGBV. The term “intimate partner violence” describes physical violence, sexual violence, stalking and psychological aggression (including coercive acts) by a current or former intimate partner.

1. Context

- Humanitarian and emergency settings (including refugees)
- Intimate Partner Violence (IPV)
- Children in the Armed Forces
- Trafficking
- School-based violence
- Conflict, war, fragile states
- Children in school

2) Sector

- Social welfare
- Justice/legal
- Health
- Education
- Coordination across sectors

3. Prevention/Response

- **Primary prevention**: Aimed at the whole community or at men and boys specifically to stop SGBV before it occurs. Addresses root causes of violence.\(^{15}\)
- **Secondary Prevention**: Focuses on preventing violence from continuing or escalating. Aimed at individuals and groups at risk of being exposed to or perpetrators of violence. May include home visits from social workers to household members who are at risk or violence; or behavioural change programs for men with anger management problems.\(^{16}\)
- **Tertiary Prevention (includes response)**: Aimed at survivors and perpetrators of SGBV. Implemented after the violence has occurred and focuses on minimizing the impact of violence, restoring health and safety, and preventing from occurring again.\(^{17}\)
- **Response**: Any intervention with the intent to improve SGBV survivors’ access to services. These include interventions improved at improving the quality of the services themselves.

Population

Studies (in low- and medium income countries as defined by the World Bank)) that include:

- Women (all ages depending upon the intervention) and girls;
- Children (birth to age 17)
- Boys and men (all ages)

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\(^{16}\) White Ribbon Australia.

• Intimate/domestic partners (all ages)
• Service providers: health workers, social workers, police, educators
• Communities

We will attempt to ensure that we include studies pertaining to women and children particularly vulnerable to SGBV including, persons living with HIV or AIDS, inter-generational partnerships, commercial and transactional sex workers (and their children), unaccompanied or separated children, street children, children associated or formerly associated with the armed forces, school aged girls and boys, etc.).

Outcome domains

Using ICT for SGBV prevention and response outcomes may include using ICT in combination with other inputs as part of a prevention or response intervention. It may also include using ICT to achieve intermediate outcomes causal pathways for the SGBV prevention and/or increasing access for survivors to SGBV services.

Outcomes fall into certain Outcome domains:

• Service provisions (Response)
  o Capacity and capability: Improving social worker capacity in recognition of SGBV symptoms
  o Infrastructure: Ensuring prevention of stock-outs of post-rape kits, appropriate equipment, medicines, supplies all required for treatment of SGBV
  o Improving attitudes of service workers
  o Improving referral and other processes related to the provision of services
• Social norms and attitudes (Prevention)
  o Changing intimate partners’ attitudes toward violence
  o Changing adolescent boys’ attitudes toward how they treat adolescent girls in school
• Laws and policies (Prevention and Response)
  o Public advocacy for communities to be open to policies and laws against SGBV
  o Advocacy for policies supporting health and social services for SGBV survivors

Outcomes under each Outcome domains can be broken down into three Outcome categories:

1. Changes in Knowledge - e.g., increased knowledge of women and children of means to avoid situations increasing vulnerability to SGBV; increased knowledge of women and children where SGBV response services are; increased knowledge of service providers of SGBV treatment protocols
2. Changes in Attitudes - Changes in attitudes by potential perpetrators of appropriateness of use of sexual violence; changes in stigmatizing attitudes of service providers toward survivors of SGBV; changes in attitudes of SGBV survivors and community members of appropriateness of accessing or referrals to treatment services after incidents of SGBV
3. **Changes in Behaviour** – Changes (decreases) in SGBV behaviour toward women and children; changes in service provider behaviour in delivering better quality services to survivors of SGBV; changes in behaviours of SGBV survivors in accessing SGBV services after SGBV incidence.

Outcomes would include for the review may include, but not necessarily be limited to:

- Changes in prevalence in SGBV against women and children
- Women and children SGBV survivors accessing services
- Reduction in potential perpetrators and intimate partners’ SGBV behaviours
- Women and children not experiencing *additional* SGBV violations
- Informed decisions enacting policies and laws addressing and supporting: 1) SGBV prevention; 2) SGBV support services
- Changes in knowledge and awareness by women and children about means for avoiding and preventing SGBV
- Changes in knowledge and awareness by women and children SGBV survivors about where and how to access SGBV services
- Changes in social norms, attitudes and behaviours among men and boys, and intimate partners regarding SGBV
- Changes in community social norms, attitudes and behaviours toward SGBV
- Service providers building improved capacity and capabilities (knowledge) in providing SGBV services to SGBV survivors

**Study designs**

Study designs to be included for review in the systematic review include:

- Experimental (e.g., randomized control trials and other experiments with random assignment)
- Quasi-experiment that include a comparison group.
## Review authors

**Lead review author:** The lead author is the person who develops and co-ordinates the review team, discusses and assigns roles for individual members of the review team, liaises with the editorial base and takes responsibility for the on-going updates of the review.

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- Systematic review methods: Jacob Milnor, William Philbrick
- Research methodologies and protocols: Patricia Mechael, Jacob Milnor, William Philbrick
- Statistical analysis: William Philbrick, Jacob Milnor
- Information retrieval: William Philbrick, Jacob Milnor

**Funding**

Currently, this review will be self-funded. We hope to apply for funding and will be monitoring opportunities through the Sexual Violence Research Initiative (SVRI).

**Potential conflicts of interest**

There are no known conflicts of interests amongst the authors at the present time.

**Preliminary timeframe**

- Date you plan to submit a draft protocol: 31 December 2018
- Date you plan to submit a draft review: 15 June 2019