Information and communications technology use to prevent and respond to sexual and gender-based violence in lower- and middle-income countries: An evidence and gap map

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Background
## Driving forces

- Increased use of using technology in multiple areas, particularly health (mHealth)

- Previous initiative to develop an evidence base for using mobile phones (and other digital technology) in health (MNCH and HIV)

- Many requests to funders to support digital technology interventions to prevent and support SGBV in LMIC

- No explicit efforts to identify evidence of “what works” based upon methodologically rigorous studies (e.g., RCTs)

- Funder requested focus on prevention, and women and girls
Objectives
Project Aim and research questions

Aim: Identify and assess published peer-reviewed studies, as well as grey literature, relevant to the use of ICT for the prevention of, and response to SGBV against women and children in LMIC.

The Project will generate and publish an Evidence and Gaps Map ("EGM"), with the possibility later to be followed by one or more Systematic Reviews ("SRs") that will answer the following questions:

• What is the existing evidence supporting the use of ICT to prevent SGBV against women and children in LMIC?

• What is the existing evidence supporting the use of ICT to improve access to services for SGBV survivors in LMIC?

• What is the existing evidence supporting the use of ICT for 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 LMIC, including the re-occurrence of SGBV?

• What are the key gaps in the evidence around using ICT for preventing and responding to SGBV against woman and children?
Overarching Goals/Vision

- Develop a baseline of the state of evidence; and conceptual framework
- Identify types of interventions
- Identify areas for future systematic review
- Recommendations for future research
- Focus on prevention of SGBV
Methodology
Process

1. EGM Protocol finalized
2. Search of largest databases
3. Searched databases
4. Screening (2 levels)
5. Coding of screened results
6. Extrapolate and analyze screened and coded results
7. Write report; peer review; develop actual EGM
Why an EGM and not a Systematic Review?

- Ideal for topics where there is little understanding of the research landscape; or those that incorporate several potential interventions with multiple outcomes and may lack widely available studies.

- EGMs differ from systematic reviews in that they can identify clusters of evidence that may be further analyzed by meta-analysis with each cluster representing a potential systematic review in itself.

- Few to no systematic reviews identifying evidence related to the use of ICT for outcomes related to prevention and/or response to SGBV against women and children in LMIC.

- Given the broad scope of SGBV and ICT interventions, an EGM is a critical first step in identifying clusters of evidence that can be further meta-analyzed as systematic reviews.

- Necessary to understand what the evidence precisely is, and if meta-analysis is even possible. Traditional systematic review would be too limiting in scope to accurately capture the evidence landscape.
Methodological Features

- Identifying outcomes and indicators, particularly for prevention
- Coding sheet: determination of categories
- Input from Steering Group
- Prevention generally difficult to measure without longitudinal studies
- Could we identify prevention outcomes in what would almost certainly be shorter studies?
- What could we use as “proxy” outcomes for prevention?
INSPIRE Framework
Preventing violence against children
RESPECT Framework

- **R** Relationship skills strengthened
- **E** Empowerment of women
- **S** Services ensured
- **P** Poverty reduced
- **E** Environments made safe
- **C** Child and adolescent abuse prevented
- **T** Transformed attitudes, beliefs and norms
PROTOCOL: The use of information and communications technologies (ICT) for contributing to the prevention of, and response to, sexual and gender-based violence against women and children in lower- and middle-income countries: an evidence and gap map

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Abstract
This is the protocol for the development of a Campbell Collaboration evidence and gaps map (EGM). The primary objective of this evidence and gap map (EGM) is to answer the following question: (i) What is the evidence connected with the use of information and communications technologies (ICT) for preventing and responding to sexual and gender-based violence (SGBV) against women and children in lower- and middle-income countries (LMIC)?

(a) the EGM will provide a structured and accessible contextual framework for research to stakeholders and policymakers in SGBV and ICT; (b) the EGM will identify gaps in the available ICT and SGBV evidence; (c) the EGM will identify clusters of evidence suitable for systematic review; and (d) the EGM will look for and build connections between related areas of research in ICT and SGBV.

As part of identifying the evidence connected with the use of ICT for preventing and responding to SGBV we seek to answer the following questions based upon the available evidence:

(a) Does the use of ICT prevent SGBV against women and children in LMIC?
(b) How effective is ICT at improving access to quality services for SGBV survivors in LMIC?
Landscape Review
Landscape Review

Informed by desk review, key informant interviews and a Stakeholder Workshop.

Effective Use of Information and Communication Technology (ICT) for the Prevention of and Response to Sexual and Gender-based Violence (SGBV) Against Women and Children in Low- and Middle-Income Countries

Landscape Review, Framework, and Call to Action

Written and researched by Patricia Mechael, Jacob Milnor, and William Philbrick

AUGUST 2021
Landscape Review

Primary Users

- Women and girls
- Those vulnerable to IPV (regardless of gender)
- Adolescent boys and girls (dating and gender norms)
- First responders/Service providers

Types of interventions

- Safety applications (Safety decision support)
- Gamification (education and awareness)
- Screening tools (decision support; recognizing signs of IPV)
- Collecting forensic evidence for prosecutions
- Addressing alcohol use (RESPECT Framework)
- Messaging to change attitude and beliefs (re: acceptability of violence)
- Training on how to handle cases of domestic violence
Landscape Review – Emerging themes

Documentation of SGBV and ICT interventions focus on internal environment of ICT interventions (exploratory research, feasibility, end-user assessment, design processes)

Limited discussion of external environment (implementation, dissemination, uptake and sustainability, and impact analysis)

ICT sustainability is most significant barrier to ICT for SGBV intervention success. Sustainable interventions tend to conceptualize their design and implementation as an iterative rather than linear process (example - Breakaway).
EGM Search and Results
EGM Search Results

6657 citations identified

4967 citations titles & abstract screened

1431 documents for screening

273 documents for screening (full article)

10 documents for coding

1690 duplicates excluded

3536 excluded

1191 excluded

263 excluded

✔ Geographic location
✔ Type of user of ICT
✔ Outcome measured
✔ Type of ICT
✔ Location of researchers

✔ Prevention or response or both?
✔ Type of prevention?
✔ Target population?
✔ How ICT used

✔ Type of study
✔ Size of cohort
✔ Study methodology
✔ Methodology rigor
✔ Situational context
✔ Enabling environment

✔ Unintended consequences addressed?
✔ Theoretical framework?
✔ Theory of Change?
✔ Policy implications
✔ Implementation issues

Detailed review (coding)
<table>
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<tr>
<th>Study</th>
<th>Outcome measurements</th>
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| Ampt et al (2020)     | Primary: pregnancy incidence and SRH related outcomes  
"GBV, stigma and rights" was one of the intervention’s "domains" in original protocol. Not mentioned in final study results |
| Bartels et al (2019)  | Value of using SenseMaker tool to generate timely mixed methods data on GBV programs and services, to gauge experiences, motivations, perceptions of benefits and outcomes of accessing such GBV services. (evaluation or more the survey tool rather than the role of ICT) |
| Brody et al (2020)    | Primary: self-reported HIV and STI testing, condom use and contraceptive use. Secondary: contact with outreach workers, escorted referral services use forced drinking and GBV experience |
| Clark et al (2020)    | Primary: Physical and/or IPV in prior 12 months  
Secondary: Psychological partner abuse in prior 12 months  
Economic partner abuse in prior 12 months  
Conflict and conflict resolution techniques in prior 12 months  
Couple communications in prior 12 months  
Attitudes toward the acceptability of IPV  
Perceptions of community-norms on the acceptability of partner violence |
| Decker et al (2020)   | Primary: safety preparedness decisional conflict, use, and helpfulness of strategies, IPV  
Secondary: resilience, relationship quality, depression, consideration and seeking IPV support service, self blame, recognition of abuse self-efficacy and danger score |
| Mishori et al (2017)  | Usability, Acceptability; feasibility and sustainability  
Not an impact or outcome study; but rather a description of a participatory development and user design process with Congolese end-users of a novel human rights app for clinicians intended to standardize the documentation of sexual violence evidence for forensic and legal purposes. |
| Eisenhut et al (2020) | Review                                                                                                                                               |
| Hayes (2015)          | Review                                                                                                                                               |
| Linde et al (2020)    | Review                                                                                                                                               |
Results of EGM

- "Only" 10 studies eligible, of which 6 were individual studies; 4 were reviews: systematic, literature or scoping

- No VAC studies eligible

- Overwhelming number of documents pertain to higher income nations.

- LMIC countries included (after screening): Nepal, DRC, Kenya, Lebanon

- Intervention areas of eligible studies
  - Safety planning using decision algorithms
  - Collection of survivor experience to inform SGBV/GBV services
  - Collection of forensic evidence connected to the perpetration of SGBV
Results of EGM

• Dearth of methodologically rigorous studies from LMIC; no eligible VAC studies

• One study described how an intervention from an HIC context was adapted to an LMIC context

• Lack of standardized indicators.

• Scarcity of eligible studies reporting results of the effectiveness of using ICT, in a control setting for the primary prevention of SGBV as an outcome, but rather reported on outcomes such as usability, secondary and tertiary prevention, feasibility and access to services.
Results of EGM

• 2 studies identified IPV prevention as a measurable outcome (within their protocols), of which only one having published outcome results at time of the search.

• Of the 4 reviews identifies as eligible, 2 were literature or scoping reviews rather than traditional systematic reviews reporting on impact outcomes with methodologically rigorous protocols.
EGM Observations

• HIC-based studies provide a foundation and some limiting promising results to explore for adaptation to LMIC contexts

• Small cluster of studies gauging end-user acceptance and feasibility
Emerging “clusters” of evidence/interventions

• Certain areas, while not “clusters” seem to be emerging and becoming focus areas
• Safety apps (e.g., “MyPlan”)
• Gaming apps for adolescents (Breakaway) (changing underlying social norms and attitudes about GBV/SGBV)
• Chat bots – (Meta) How can technology increase program impact?
  • What is the potential for social networks to effectively needed as a vehicle for SBCC?
  • Can we use tools that have traditionally used in ad recall to test SBCC (exposed vs unexposed)?
Mobile applications addressing violence against women: a systematic review

Katharina Eisenhut 1,2, Elsa Sauerborn 1, Claudia García-Moreno 3, Verina Wild 1

Abstract
Introduction: Violence against women is a pressing global health problem that is being met with a new intervention strategy—mobile applications. With this systematic review, we provide an initial analysis and functional categorisation of apps addressing violence against women.

Methods: We conducted a systematic online search conforming with Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines to identify apps addressing violence against women in five World Bank regions (Europe and Central Asia; North America; Latin America and the Caribbean; Middle East and North Africa; South Asia; and sub-Saharan Africa). Applications with location of initiation in mentioned regions and ≥10 downloads were included. Data on vector (target group), year of release, location of initiation and implementation were extracted. By means of a structured qualitative content analysis, applications were then categorised according to their main functions.

Results: Of 327 relevant applications, 171 were included into the systematic review and assigned to one of five identified categories of main functions, respectively: emergency, avoidance, education, reporting and evidence building, and supporting apps. The largest proportion (46.78%) consisted of emergency apps, followed by education, reporting and evidence building, supporting and avoidance apps in descending order. With regards to the geographical distribution of app categories, significant (𝜒²(20)=26.172; p<0.005) differences among the included regions were found.

Conclusion: A vast proportion of apps addressing violence against women primarily draw on one-time emergency or avoidance solutions, as opposed to more preventative approaches. Further research is necessary, critically considering questions of data security, personal safety and efficacy of such mobile health interventions.

Key questions:
What is already known?
- Violence against women is a preventable global health issue of epidemic proportions, affecting approximately one third of the global female population.
- Recently, violence against women has been met with a new intervention of increasing global significance and scope, mobile applications (apps), despite their popularity and potential to heavily influence public health strategies such apps have not yet been systematically reviewed in the scientific literature.

What are the new findings?
- Most apps addressing violence against women (46.78% out of 171 apps included into the systematic review) primarily use short-term emergency functions.
- However, an increasing amount of apps offer education, reporting and evidence building and supporting functions as the prevailing feature.

What do the new findings imply?
- Although all mentioned app functions can be beneficial to address violence against women, the dominance of emergency apps should be critically assessed, as it indicates that the currently prevailing mobile health strategy is heavily skewed towards one-time solutions for isolated events of violence against women.
- Further research on the benefits, safety, efficacy and sustainability of apps in the context of already existing traditional intervention strategies addressing violence against women is necessary.

Illustrative search results

STUDY PROTOCOL
Open Access

Adapting the myPlan safety app to respond to intimate partner violence for women in low and middle income country settings: app tailoring and randomized controlled trial protocol

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Abstract
Background: Intimate partner violence (IPV) is a leading threat to women’s health and safety globally. Women in abusive relationships make critical decisions about safety and harm reduction while weighing multiple competing priorities, such as safety of children, housing and employment. In many low- and middle-income countries (LMIC), IPV prevention and response services are limited and women lack access to safety planning resources. In high-resource settings, an effective safety decision aid app (myPlan) has been found valuable in reducing decisional conflict and empowering women to take action in accordance with their safety priorities. This paper describes 1) the community-participatory formative process used to adapt the myPlan app content, interface, and implementation for the Kenya context, and 2) the randomized clinical trial study protocol for efficacy evaluation of myPlan KenyA.

Methods: A community-participatory formative process engaged service providers and stakeholders, as well as IPV survivors for adaptation, followed by an in-depth pilot and final refinements. A randomized clinical trial design will then be used to determine efficacy of the myPlan Kenya app compared to standard care among women reporting IPV or fear of partner and living in an urban settlement. MyPlan Kenya app provides and solicits information on: a) relationship health; b) safety priorities; and c) severity of relationship violence. Based on the woman’s inputs, the evidence-based algorithm developed for myPlan Kenya generates a tailored safety plan. Outcome measures are assessed at baseline, immediate post-intervention, and 3-month post-baseline. Difference-in-differences analysis compares primary (e.g. safety preparedness, safety behavior, IPV), and secondary outcomes (e.g. resilience, mental health, service utilization, self-blame) across timepoints by group.

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# Theory of Change

<table>
<thead>
<tr>
<th>Health Impact</th>
<th>The reduction of SGBV, including VAC in LMICS</th>
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<tbody>
<tr>
<td><strong>Impact</strong></td>
<td>Improved access to SGBV resources and services in LMICs</td>
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</tbody>
</table>
| **Outcomes**  | ● Transformed Gender Attitudes and Social Norms (Prevention)  
                 ● Healthy Relationships (Prevention)  
                 ● Reduction of Poverty and Economic Dependence (Prevention)  
                 ● Women and Children Empowered (Prevention)  
                 ● Enforcement and Implementation of Laws (Prevention and Response)  
                 ● Safe Environments (Prevention) |
| **Outputs**   | ● Men and boys engage with gender transformative messaging and are able to articulate the difference between harmful and healthy gender norms.  
                 ● Partners are able to express their needs and concerns in an egalitarian and healthy manner.  
                 ● Women and girls have increased financial resources, including planning and economic activities.  
                 ● Women and children are able to assess their vulnerability to violence and seek resources to prevent it.  
                 ● SGBV survivors know where and how to access response resources.  
                 ● First-responders are aware of laws and have access to standardized SGBV reporting via ICT.  
                 ● Law enforcement has access to consistent and standardized forensic evidence |
| **Inputs**    | ● Use of ICT to change attitudes and behaviors related to gender and SGBV via SMS, gaming, role-playing, etc.  
                 ● ICT-facilitated relationship-strengthening skills messaging.  
                 ● Resources for women’s increased agency, financial independence and planning, delivered via apps, SMS, and other ICT.  
                 ● SGBV (IPV) risk self-screening and planning tools.  
                 ● Other personal safety tools (panic buttons, resource mapping, etc) at hand via ICT |
| **Enabling Environment** | ICT Landscape with sufficient ICT infrastructure and resources, favorable ICT and SGBV related regulation / laws, ICT end-user feasibility and access, Budgeting, Partnerships and Intervention Sustainability |
Gaps

• Lack of consensus set of harmonized outcome indicators, particularly around prevention
• ICT use of SBCC
• RCT study methodologies; Rigor in study methodologies; not merely descriptive or serving as communications materials.
• ICT and studies addressing underlying causes of SGBV (e.g., changing social norms)
• Studies around ICT for VAC (although Breakaway may serve as a prototype)
• Addressing sustainability (after initial development and piloting of interventions)
• Addressing unintended consequences of using ICT (technology facilitated SGBV; role in human trafficking)
• Understanding how data collection (around incidence of SGBV) can be linked to successful prosecutions (and reductions of SGBV)
<table>
<thead>
<tr>
<th>Sexual and Gender Based Violence (SGBV) Intervention Outcomes</th>
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</thead>
<tbody>
<tr>
<td>Primary: SGBV Incidence</td>
</tr>
<tr>
<td>Intermediary: Strengthening Relationship Skills</td>
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<tr>
<td>Intermediary: Empowerment of Women</td>
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<tr>
<td>Intermediary: Access to Services / Services Ensured</td>
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<tr>
<td>Intermediary: Reduction of Poverty</td>
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<tr>
<td>Intermediary: Safe, Environments</td>
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<tr>
<td>Intermediary: Child, and Adolescent Abuse Prevention</td>
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<tr>
<td>Intermediary: Transformed Attitudes, Beliefs, and Norms</td>
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<tr>
<td>Intermediary: SGBV Reporting/Monitoring</td>
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<tr>
<td>Descriptive / SGBV Outcomes Not Measured</td>
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<td>Feasibility Study</td>
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- Randomized Control Trial
- Systematic or Landscape Review
- Quantitative Methodology
- Qualitative Methodology
Moving forward

• Potential systematic review areas:
  • Safety Apps (decision algorithms)
  • Responding to SGBV (e.g., access to quality services)

• Understanding more the role that ICT can play in SBCC
  • What is the potential for social networks to effectively needed as a vehicle for SBCC?
  • Can we use tools that have traditionally used in ad recall to test SBCC (exposed vs unexposed)?

• Identify and understand unintended consequences and the “due no harm concept”

• Consensus/harmonized outcome indicators.

• Deeper understanding how intervention proven successful in HIC context can be scaled or adapted to LMIC.

• Call-to-Action: Research into ICT and SGBV effectiveness (impact indicators)
THANK YOU!

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