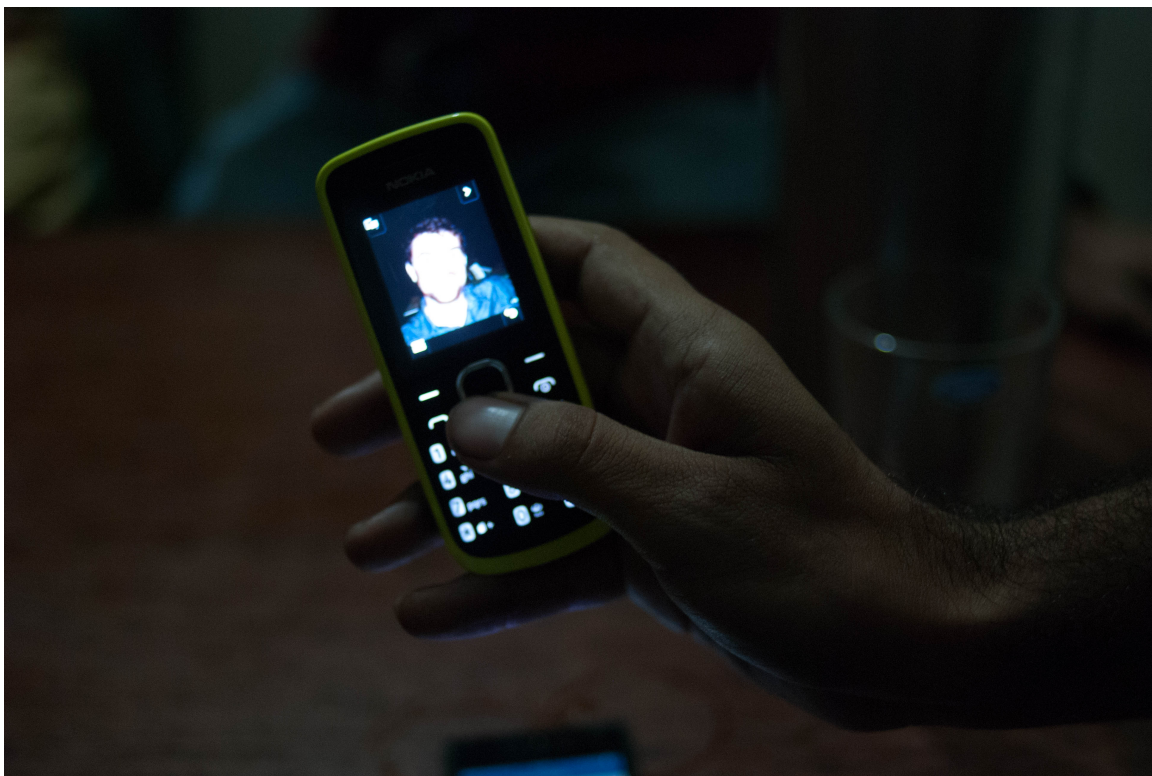


Digital and Social Media for Social and Behaviour Change Communication

Linda Raftree for iMedia Associates

March 2019



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Executive Summary

As access to mobile phones and the Internet has expanded over the past decade, so too have efforts to incorporate new media channels, digital platforms and social media into social and behaviour change communication (SBCC) efforts. In the Global South, access and use are still not synonymous, however. Although young people in low-income settings indeed access mobile phones, theirs is not an experience of “always on, always connected.” For most, the online experience is mobile- rather than computer-based. While there is no such thing as homogeneous mobile or Internet access, many young people in lower-income contexts share and borrow phones from friends and relatives rather than owning a phone. These phones may be low-end phones, second-hand phones, or pirated phones that do not offer consistent reliability and whose features are behind the market.

Despite the challenges, young people the world over do find ways to navigate financial and social constraints so that they can participate in adolescent and teen social life and youth culture. Education-entertainment programming can tap into these urges and capitalize on multi-modal, transmedia approaches to reach and engage with young people. The key is to understand youth’s interests and needs, their socioeconomic contexts, and their media and technology habits and preferences and to have a strong understanding of social and behaviour change theories and practices.

This paper explores the ways in which digital and social media channels can be used successfully, appropriately, and responsibly to drive behaviour change in young men and women from lower socioeconomic groups. We examined peer-reviewed literature, grey literature, NGO research and evaluation reports, industry framework and guidance documents, and articles and blog posts in order to explore relevant SBCC theories, models, frameworks and approaches; to uncover learning from current and past digital SBCC initiatives; to identify good practice and common pitfalls in digital SBCC design, to lay out good practices for digital safeguarding; and to provide a few examples of how monitoring and evaluation and learning can be designed for SBCC initiatives.

SBCC theories, models, frameworks and approaches

Most SBCC frameworks have emerged from the health sector, and existing theories are often inadequate for mobile or digital SBCC due to their interactive and adaptive nature. Digital SBCC interventions should be grounded in theory, and they may be more applicable if they are co-

designed with users and aligned with their media usage preferences and their information seeking habits and behaviours.

Theories, models, frameworks and approaches that have some relevance for digital SBCC include:

- Trans-theoretical (Stages of Change) Model
- Social Cognitive Theory
- Behavioural Economics and Nudge Theory
- Mental models
- Ecological Models of Behaviour Change
- Social Norm Theories
- Narrative Persuasion Theories
- Diffusion of Innovation Theory

Despite lending themselves to new ways of reaching and engaging with target groups, some of these theories raise ethical issues due to their potential for misuse or manipulation, and prompt questions such as ‘who decides what is desirable behaviour?’

What do current and past digital SBCC initiatives tell us?

Several studies conducted over the past decade have found that teens and youth are open to text messages for health promotion, and they find them appealing and culturally acceptable.

Benefits of digital and social media for SBCC include:

- increased interaction with others;
- more available, shared, and tailored information;
- increased accessibility and widening access to health information;
- peer/social/emotional support;
- public health surveillance; and
- potential to influence health policy.

Behaviour change interventions appear to be most effective when people are engaged on multiple levels. Reminders can be successful for simpler behaviours, and there is varied evidence on whether virtual behaviour change efforts are equally as successful as offline ones, or if blended approaches that combine online and offline approaches work best and when. Users are largely unaware of data privacy and confidentiality, data security and the dangers of disclosing personal health information online or over via insecure means such as text message. Privacy is particularly challenging in environments where mobiles are shared or borrowed.

Some entertainment-education examples to explore further include *16 and Pregnant*, which may have influenced the rate of teen pregnancies in the US; *East Los High*, which was successful at reaching American Latina/o youth with sexual and reproductive health messages; the *Voices for Change* broad program that aimed to change social norms around gender in Nigeria; and

SKAM, a Norwegian program dealing with teen girls' day-to-day challenges which became a cult hit among global teens.

Good practice and common pitfalls in digital SBCC design

A number of good practices are highlighted in published literature and in documentation from practitioners and organizations, including:

Ground efforts in theory and find ways to understand and respond to the complexity of underlying determinants of behaviour.

Understand the target population and the social context. Successful approaches are context-specific and rooted in an understanding of behaviour, its social, environmental, economic and motivational determinants, and obstacles to change. Programs should address wider economic and cultural barriers to behaviour change.

Understand and design for user habits, preferences, and interests. This includes the devices, channels, media sources, influencers, data packages, network strength, and other elements that are directly related to whether and how people access and use digital devices, services and platforms.

Watch out for cost and data limitations. Low-income users tend to have frugal access habits. SBCC programs should carefully consider how to minimize data consumption by designing specifically for those who have limited minutes or text messages allowed.

Carefully think about language and literacy. Text messages for health information, motivating individuals, and encouraging self-management is popular, however these do not work where there is low literacy. Language can also be a politicizing factor, and language choices should be made carefully to avoid creating conflict or exclusion.

Determine the right frequency of messaging or engagement. Though SMS-based reminders trigger individuals to think about topics they might not otherwise consciously consider, or only consider at certain times, if messages are seen as 'nagging' they will not be effective.

Build trust and find the right voice and messenger(s). To maximize likelihood of behaviour change, the recipient needs to believe the sender of the message is a credible source of information. Finding trusted messengers and influencers and the right tone is a known good practice from pre-Internet days, and it holds true for digital SBCC.

Prepare with signposting and ensure capacity to respond to demand generated. SBCC programs should plan for how they will respond to any demand created by increased awareness. Reliable, trustworthy, vetted online and offline support systems and services should be in place to which users can be signposted.

Budget for moderation of content and comments. Both Facebook and WhatsApp have been used to spread false and misleading information that many believe has influenced election processes, fueled hate and violence, and led to wider divisions on topics like race and gender. Good moderation can help to stem false or misleading information from spreading on social channels.

Don't be fooled by vanity metrics. Vanity metrics are those that focus on large numbers of reach or engagement: for example, page views, clicks, or likes, yet say little about the quality of engagement or the wider impact on behaviour change.

Digital Safeguarding good practices

The umbrella of “Digital Safeguarding” includes a) safeguarding when people use digital devices or engage with digital services or platforms, b) protecting data and data privacy, and c) securing data. Women and girls are especially vulnerable to online violence, harassment and abuse, as well as LGBTQ identifying persons and lower societal strata, such as the Dalit, in some cases.

There are multiple safeguarding areas to consider when engaging adolescents in digital initiatives, including:

- big picture ethical and risk review (is embarking on this effort ethical?);
- safeguarding, informed consent, privacy and security of data collected during formative or ongoing research activities;
- building privacy and data security into platform, product or outreach design;
- ensuring that the benefits of collecting personal or sensitive data outweigh the privacy risks;
- following applicable country and global legal frameworks related to data privacy and transmission across borders;
- protecting and securing data collected or generated throughout the engagement process;
- ensuring clarity on how and where data flows and reviewing how partners will manage data privately and securely; and
- considerations around the online experience itself such as safe and appropriate content, comments and moderation, and protection from online abuse, bullying, harassment, hate speech, violence, scams or grooming.

Monitoring, evaluation and learning for digital SBCC

The evidence base on digital SBCC is still weak and it is recommended that future studies adopt rigorous designs and endpoints. Creative approaches to monitoring, evaluation and learning (MEL) of digital SBCC include those found in the following programs: 16 and Pregnant, East Los High, Voices for Change, Springster and HNI's 3-2-1. Some digital tools and emerging methods, including interactive voice response (IVR), Internet messaging platforms, and big data can enable interactive, engaging and/or innovative evaluation processes.

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Acronyms and abbreviations

AIDA:	Awareness, Interest, Desire, Action framework
ASRH:	Adolescent Sexual Reproductive Health
BCC:	Behaviour Change Communication
GDPR:	General Data Protection Regulation
ICT:	Information and Communication Technology
(I)NGO:	(International) Non-Governmental Organization
IVR:	Interactive Voice Response
MEL:	Monitoring, Evaluation and Learning
MERL:	Monitoring, Evaluation, Research and Learning
SBCC:	Social and Behaviour Change Communication
SMS:	Short Message Service
STI:	Sexually Transmitted Infection
ToC:	Theory of Change
TTM:	Trans-theoretical Model of Behaviour Change
V4C:	Voices for Change

Glossary of terms

Basic phone: a mobile phone that can only call or text, does not have Internet (also known as a feature phone)

Chatbot: a menu-based text services with automated replies

Choice architecture: the order in which choices are provided on a menu or survey

Data packages: pre-paid data or 'air time' that is purchased for using a mobile

Discoverability: level of ease with which a platform or service is discovered/found

Ground Truthing: further investigation of data gathered remotely, often via digital

Internet Messaging: platforms like WhatsApp or Facebook Messenger

Interactive Voice Response (IVR): a voice- and menu-based service for sharing information

mHealth: mobile health interventions

Mobile internet: Internet accessed via mobile phone, rather than broadband or wifi

Smart phone: a mobile phone that can access the internet and load applications

SMS: short message service, in other words, a text message

Transmedia: a narrative or project using multiple platforms and formats including current digital technologies

USSD: a form of text message that uses stars and hash tags; common in mobile finance

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Introduction

As access to mobile phones and the Internet have expanded over the past decade, so too have efforts to incorporate new media channels, digital platforms and social media into social and behaviour change communication efforts. In the 'Global South,' access and use is still not the same thing. Young people do access mobile phones, however, unlike their counterparts in the Global North, theirs is not an experience of "always on, always connected" and for most, the online experience is fully mobile phone-based. While there is no such thing as homogeneous mobile or Internet access, it is common for young people in lower-income contexts to share and borrow phones from friends and relatives rather than to own their own phone. These phones may be low-end phones, second-hand phones, or pirated phones that do not offer consistent reliability and whose features are several years behind the market. Girls in some contexts enjoy lower levels of access and use than boys, and youth with less disposable income also experience lower levels of access and use.

Young people the world over; however, find ways to navigate financial and social constraints so that they can participate in adolescent and teen social life and youth culture. Education-entertainment programming can tap into these trends and capitalize on multi-modal, transmedia approaches to reaching and engaging with young people. The key is to understand youth's interests and needs, their socio-economic contexts, and their media and technology habits and preferences along with a strong understanding of social and behaviour change theories and practices.

This paper explores the ways in which current and emerging digital and social media channels can be used successfully, appropriately, and responsibly to drive behaviour change in young men and women from lower socioeconomic groups. We examined peer-reviewed literature, grey literature, NGO research and evaluation reports, industry framework and guidance documents, and articles and blog posts in order to explore relevant social and behaviour change communication (SBCC) theories, models, frameworks and approaches; to uncover learning from current and past digital SBCC initiatives; to identify good practice and common pitfalls in digital SBCC design, to lay out good practices for digital safeguarding; and to provide a few examples of how monitoring and evaluation and learning can be designed or SBCC initiatives.

1. Mobile access and use

A 2018 Pew Research Center study shows a rise in the number of people who use the Internet, a smart phone or social media in emerging economies/developing economies. Over the past five years, global Internet use has risen from 42 to 64 percent, smartphone use from 24 to 42 percent and online social networking from 34 to 53 percent. Internet and social media use continue to lag in some developing economies, however. In India in particular, 35 percent of people age 18-36 reported occasionally using the Internet or owning a smartphone (as opposed to just 13 percent of those over 37 years old). 53 percent of those with a higher education level reported Internet and / or smartphone use versus 11 percent of those in lower education brackets. Overall, just one-in-five adults in India use social networking platforms such as Facebook, and a gender divide exists, with 28 percent of adult males using social networking platforms as compared to 11 percent of women. Sub-Saharan Africa is also behind, as one of the least connected parts of the globe. Developed nation use, on the other hand, has plateaued over the past few years (Poushter, Bishop and Chwe 2018).

A 2018 Vodafone Foundation and Girl Effect study that included over three thousand girls in twenty-five countries emphasizes, **“There is no such thing as homogenous access.”** In particular, the mobile gender gap is highly context dependent, with a number of intersecting factors and implications. Since girls often gain access by borrowing and/ or sharing friends and relatives’ phones, they may be less likely to have their own accounts or enjoy privacy of usage, so they tend to use phones more cautiously. When girls can access phones, they use them as much as possible. Over half of the girls included in the study said they use a phone every day or multiple times a day, and a 32% said they use a phone at least once a week. The study highlights that **while both boys and girls face cost barriers, girls also have safety concerns related to mobile use, and so do their parents** (Vodafone Foundation and Girl Effect 2018).

The **distinction between access and use is critical** (Banaji, Livingstone, et al. 2018) and should be considered when designing digital or social media outreach because phone ownership and usage can be transient. In the Global North there is no meaningful difference between mobile access and use, but in the Global South, this is not the case. Young people often borrow rather than own mobiles. Youth may sell their phones if they need cash, and mobile phone *borrowship*¹ is influenced by factors such as family status (e.g. foster status), household resources and livelihood patterns, and intergenerational relationships (Porter, et al. 2012) (Banaji 2017). Young people use different tactics used to overcome constraints that affect their media use--rationing phone use to save battery life, limiting phone functions to save data costs, finding free or cheap games or applications, deleting games to free up storage space, and avoiding commercial tactics to eat into airtime (Walton and Pallitt 2012). These realities and behaviours need to be considered when designing digital social and behaviour change communications.

¹ The term “borrowship” is commonly used in the mobile space to distinguish between those who are owners (mobile phone ownership) and those who share or borrow mobile phones (mobile phone borrowship).

2. Relevant theories, models, frameworks and approaches

Most SBCC frameworks and evidence have emerged from the health sector. Reviews of mobile health behaviour interventions have concluded that they would benefit from greater application of behavioural theories, yet **existing theories are often inadequate for informing mobile SBCC, which is more interactive and adaptive** (Riley, Rivera, et al. n.d.). Even when interventions are initially informed by theory, they do not always reflect a theory-based approach throughout their implementation. Additionally, **available theories do not always mesh with the dynamic nature of mobile devices and social media** (Shane-Simpson, et al. 2017) (Painter, Hynes and Glanz 2008) (Riley, Rivera, et al. 2011). The field is still learning how to manage the complex mix of ingredients in a mobile effort. In other words, those designing mobile SBCC initiatives must consider the capabilities and affordances of a particular device (basic phone? smart phone?); the nature of the channel (SMS? Call? Internet Messaging?); what can be carried on the channel (Text? Voice? Video?); and the interests, habits, incomes, needs and characteristics of the target population (Health Communication Capacity Collaborative (HC3) 2013).

In a literature review conducted for Girl Effect, the behaviour change research group New Knowledge explored possibilities and limitations related to knowledge, attitude, and practice (behaviour) change that can be supported on digital platforms. They found that digital interventions that link theory and practice to change norms are uncommon and that existing efforts are still in early stages. **They recommend a holistic approach that goes beyond a focus on just knowledge and confidence and that also finds ways to address potential barriers to behaviour change.** There is also consistent agreement that digital behaviour change **interventions designed for adolescents should be co-designed with young people, fun and engaging, and aligned with how they use media / social media and their information seeking habits and behaviours.** The literature that follows digital behaviour change interventions over an extended period of time is limited, and much of the literature is context-specific. This makes it **difficult to compare across multiple interventions due to the variation found among digital platforms.** For this reason, questions remain about sustainability and duration of change and about *how much* change needs to happen *over how long* for it to be durable for the long-term (Shane-Simpson, et al. 2017).

Below we list some of the theories, models, frameworks and approaches that are most relevant for digital social and behaviour change communication work:

The Trans-theoretical (Stages of Change) Model (TTM) features a scale for measuring an individual's *self-efficacy* (confidence in one's own ability to achieve a desired action or change) and outlines five stages of change: *pre-contemplation* (no intention to take action within the next six months), *contemplation* (an intent to take action within the next six months), *preparation* (an intent to take action within the next 30 days and has taken some behavioural steps in this direction), *action* (changed overt behaviour for less than six months), and

maintenance (changed overt behaviour for more than six months). The subsequent stage, characterized by no temptation to relapse and complete confidence in one's ability to maintain the changed behaviour pattern, is the termination phase.

When it comes to TTM, interventions with high levels of utility and impact have the most potential for change. It may be useful to establish both a *utility criterion* that can demonstrate efficacy in changing a given behaviour, and an *impact criterion* that can demonstrate intervention effectiveness in terms of measurable change among the target population (Prochaska, Wright and Velicer 2008). TTM does not consider social context and its influence on individuals; rather it assumes individuals make logical decisions at each stage. Additionally, the TTM must address each stage separately to be most effective. TTM has been applied to tailored health behaviour change interventions such as dietary change (Barnett, et al. 2016).

Max St. John offers a formula for using TMM with social media SBCC (St John 2011). It includes phases of insight, intervention and evaluation. At the *insight* phase, he recommends doing research and talking with users to understand: Who is the audience? Where do they go and what do they do? Where do they hang out? What are their attitudes and language? Who do they listen to? Who are their influencers?

At the *intervention* phase, he recommends tying gaming and game theory into TMM. During the pre-contemplation ("I'm unaware that I have a problem") a soft introduction of the issues is introduced via game play. At the contemplation phase ("I need to do something about this") use education through community engagement via a Facebook page. At the preparation phase ("I know what I'm going to change") provide recipes and other takeaways to make change easy. At the action phase ("I've recently changed my behaviour") encourage the audience to self-report through comments. And during the maintenance phase ("I haven't relapsed") use long-term contact through Facebook to help maintain behaviours.

During the *evaluation* phase, one should look for contribution and indicators that demonstrate success since change is hard to attribute. Possible metrics include: awareness (exposure to messaging, game plays), contemplation (engagement through a page, likes and comments), and preparation (uptake of tools, downloads of recipes). To measure social return on investment, online and offline qualitative and quantitative surveys can be used. Social media can be used to measure social capital in terms of community make-up (size and segmentation by behaviour), intensity of use (regularity and depth of engagement) and network data (number and strength of connections) (St John 2011).

Social Cognitive Theory, originally called Social Learning Theory this is a non-static and non-linear model showing how beliefs operate together with goals, outcome expectations, and perceived environmental impediments and facilitators in the regulation of motivation, behaviour, and the state of wellbeing. It posits that behavioural change is embedded within the

perception of a person's belief that they can accomplish a goal (Bandura 2002) (Barnett, et al. 2016).

Social Cognitive theory can be approached on social media in the following way. For reciprocal determinism (what's telling me to change?) one should find the right partners, the best ways to drive people/traffic to a site, and the right social media channels. For behavioural capability (am I able to make this change?) it's important to provide tools, advice, training and information. Self-efficacy (can I really do this?) can be seen as building confidence through the ability to create new online networks. For observational learning (if they can do it, so can I), it's important to promote realistic role models that prove it's possible. Finally, to reinforce (how can I celebrate my achievement) feedback mechanisms can provide encouragement. He notes it's important to use role models who are credible experts, celebrities, individual stories of achievement, wisdom of the crowds (weight of numbers), and wisdom of friends (people you know and trust in real life) in the process (St John 2011).

Social Cognitive Theory has strong theoretical links to behavioural economics, as Bandura was one of the early theorists around identity, which has grown to hold an important space in behavioural economic theory. The World Bank's World 2015 Development Report on 'Mind and Society' is evidence of the growing role of behaviour economics in development, the importance of behaviour change in development, and the importance of identity in both (World Bank Group 2015).

Behavioural Economics and Nudge Theory emerged in 2008 from the economics field. It proposes that "higher order positive pursuits drive change more productively than contemplating the elimination of risk or threat." This theory posits that people employ simplifying models to consider opportunities that use grouping or schemas which identify generalized models, past practice, and recommendations. A 'nudge' directs a person toward a specific choice by changing the default option, description, anchor, or reference point. According to this theory, social change can be achieved using a commercial model of choice direction while preserving a person's individual freedom of choice (Thaler and Sunstein 2008) (Thaler, Sunstein and Balz 2014).

The structure and mechanisms of social media have proven ideal for 'nudging' because social media sites collect and analyze the personal data of their users (often unbeknownst to them). This data (in the case of massively population sites like *Facebook* and on-line dating platforms for example) can reveal a user's attitudes, opinions, purchases, habits, frequented locations, political leanings, sexual orientation, religion and more. Even when one site does not hold a huge amount of data about an individual person, because individuals are tracked across multiple platforms, the combined data allows them to be targeted and, in some cases, manipulated by malicious or nefarious actors.

Mental Models can be helpful for situating the cultural determinants of behaviour and the decision-making process. People draw on concepts, categories, identities, prototypes, stereotypes, causal narratives, and worldviews from their communities when they frame and respond to experiences. These mental frameworks help make sense of how the world works and one's their role in the it. Mental models differ from social norms because they do not need to be enforced by direct social pressure and do not necessarily focus on specific behaviours. People can hold onto multiple, harmful, and/or even contradictory mental models, and the one they draw on depends on how a given context triggers a specific way of understanding the world. Exposing target groups to experiences that broaden their mental models may trigger a change in beliefs about what a person is capable of (World Bank Group 2015) (Shane-Simpson, et al. 2017).

Ethical challenges have been raised, however, with regard to nudging and mental models. These can be seen as paternalistic approaches which assume that development agencies, governments, or the private sector should be nudging people towards particular behaviours. New Knowledge highlights that nudge theory is seen by many as paternalistic in its belief that people want to follow their desires but are content to limit their choices to pre-established options and that people are easily swayed towards solutions that others have prioritized for them. They note the undue influence of those who determine and set the options and how those options are structured to achieve particular ends and perceived 'choice' (Shane-Simpson, et al. 2017).

Examples like that of Cambridge Analytica's influencing of the US elections and Brexit in the UK, and the accusations of Russian meddling in global democracies using social media tactics that were perfected in the Ukraine can give pause for thinking about the actions of any kind of behaviour change communication campaign that is not fully transparent. Choice architecture can be used to oppress and manipulate by encouraging a behaviour before a person might willingly choose it on their own, in other words, moving someone from pre- contemplation to action without their having exercised agency or self-efficacy in that domain. When user profiling is conducted based on data and people are targeted with nudges or social media content that pushes them to change without their knowledge, the lack of transparency can be unsettling (World Bank Group 2015). The EU's General Data Protection Legislation (GDPR) has specific legal orientation about what is acceptable profiling on social media and other digital platforms, and stricter guidance when that profiling is on children under the age of 13 (and in some EU countries the age of 16) (European Union 2016).

Ecological Models of Behaviour Change recognize multiple levels of influence (intrapersonal, interpersonal, organizational, community, and policy level) on individuals' behaviours and thus recommend strategic interventions which address these multiple levels as they influence individuals within their specific context. If any layer of the context includes substantial barriers to behaviour change, an individual may be less likely to make that change, even if motivated and regardless of whether they have the necessary skills to make the change.

Ecological models are most effective when informing behavioural interventions and targeting very specific behaviours (e.g., condom use), but it can be difficult for researchers and practitioners to make sense of how broader levels of influence interact with levels more proximate to the individual (Sallis, Owen and Fisher 2015).

Social Norm Theories. This group of theories consider norms to be the beliefs held about which behaviours are appropriate in a specific group. Social norms establish behaviour expectations and these in turn affect a person's decisions, either by shuttering possibilities or opening opportunities. As New Knowledge point out, norms do not influence actions in a static way because an individual's choices can reflect subtle or deep changes in beliefs and attitudes that occur because of social interactions. These shifting normative perceptions influence behavioural change, and since adolescents are highly influenced by their peers, it is important to consider social norms and their role in behaviour change.

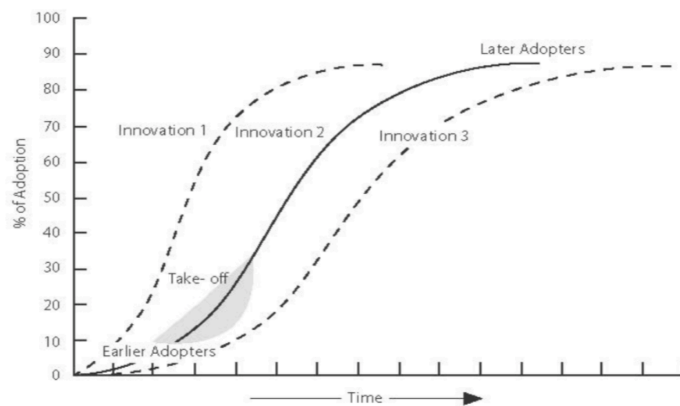
A 2011 study cited by New Knowledge assessed how offline perceptions of peer norms could influence whether adolescents participate in risky sexual behaviours online. The findings indicate that both injunctive and descriptive peer norms predicted whether an adolescent engaged in risky online sexual behaviour. Descriptive peer norms were more likely to predict the risky behaviour over time (Baumgartner, Valkenburg and Peter 2011). **Adolescents may, then, be more influenced by how they believe their peers actually behave than by their peers' approval of a particular behaviour.** New Knowledge recommends that digital interventions targeting adolescents consider opportunities to illustrate how peers behave in ways that challenge or disrupt systems and social norms (Shane-Simpson, et al. 2017). New Knowledge goes on to note research showing that small groups are often incubators of social change and that **the formation of small, safe groups might be a good strategy for encouraging collective identity development for young people that starts in a small group and then expands beyond it, thus creating a safe space for individual behaviour change and adoption of new norms** (Fine and Harrington 2004) (Shane-Simpson, et al. 2017).

Narrative Persuasion Theories explain the factors and processes that facilitate changes in audience members' knowledge, attitudes, and behaviours. They are commonly used in edutainment programming. Elements of narrative-based entertainment can help an audience suspend disbelief, in turn reducing resistance to counter-arguments (Slater and Rounder 2002) (Moyer-Guse 2008). Edutainment programs often use social cognitive theory along with direct exposure to media models and indirect social learning through interpersonal discussions (Bandura, A. 2004). **Narratives resonate especially well when the audience perceives the stories to be realistic and relates with the characters because of similarities or because of their desirable attributes** (Moyer-Guse 2008) (Murphy, et al. 2011). Additionally, **narratives built with familiar cultural markers are especially effective when targeting minority populations** (Wang and Singhal 2016) (Larkey and Hecht 2010) (Lee, Fawcett and DeMarco 2015).

Two meta-analyses demonstrated advantages of using narratives in health interventions, finding that narratives can produce a sizably significant impact on combined changes in attitudes, intention, and behaviour, even when they have a relatively small effect on individual outcomes. **Narratives provoke affective audience response, and those delivered through audio and video have been found to be more effective than those delivered through print.** (Shen, Sheer and Li 2015) (Zebregs, et al. 2015). Narrative persuasion theories were used for acclaimed *East Los High* program development for character building and content production and they also guided evaluation of the programs in terms of key measures and hypotheses (Wang and Singhal 2016).

Diffusion of Innovations Theory (Rogers 2003) explains how individuals and organizations adopt innovations—such as ideas, products, or services—over time and examines how adopters communicate and promote innovations. Successful innovations typically spread gradually from a few early adopters to the larger population. The theory distinguishes between 5 different types of adopters: innovators, early adopters, early majority, late majority, laggards). It includes five factors that determine adoption or rejection of a new behaviour: perceived complexity, compatibility, observability, trialability and relative advantage. Those using this theory are recommended to *identify type of adopters to reach, develop a strategy* (knowledge, persuasion, decision, implementation, confirmation), and *design knowledge management products and services* to reach them.

Right: The diffusion process, adapted by (Ohkubo, Limaye and Harlan 2015) from (Rogers 2003).



As the graph shows, a curve plotting the cumulative percentage of a population adopting an innovation over time typically has an S-shape.

Some innovations have a rapid rate of adoption (Innovation 1) and others have a slower rate (Innovation 3). Critiques of the theory include concerns that it does not consider individual resources or social support for behaviour change (Barnett, et al. 2016).

Brand and Commercial Frameworks. In recent years such frameworks have sometimes been adopted for SBCC. One simple model used by the market research company TNS is called the AIDA: Awareness, Interest, Desire, Action model, where awareness refers to creating awareness of a brand, product, or service; interest refers to getting people interested in knowing more about it; desire refers to demonstrating the brand has benefits to the consumer, so that people want to own it; and action refers to prompting people to take the final step and commit to purchasing the product (TNS 2016).

The Nike Foundation used a “branded media” approach for its SBCC work, noting that brands have been inspiring people to change behaviour for decades. The idea is that brands are critical tools for achieving sustained change at scale because they serve as integrators and unite a wide range of actors. Brands develop intangible benefits, understanding and motivations and are able to persuade people with promises that draw them into products or services that are meaningful and that inspire people to act. Brands also create communities around them that people want to be a part of, and use influencers that people want to be like (Nike Foundation 2013).

Another commercial model is the ‘customer journey’ used for discovery and use of digital products and services. In this model, five steps are considered: non-aware (users have potential to access the service but are not aware of it); aware (users have become aware of the service); cursory (users have not accessed the content but have had a superficial interaction with the service); occasional (users have engaged with the service a limited number of times); and repeat (users who have used the services several times and accessed content repeatedly) (Wills, Morain and Baudeau 2016). The customer journey model is useful to understand if and how users arrive to, interact with, and/or drop off of different parts of a digital platform, service or site. This in turn can help designers to improve the technical side (user interface), content or user experience to ensure that users are able to easily navigate through the platform and so that they stay there long enough to interact with the content (a necessary step along the road to achieving impact).

Social Media and ‘Transmedia’ Approaches have become increasingly common as mobile and Internet use has grown. In transmedia storytelling, narrative elements are creatively coordinated across different media platforms to build a story world, engage a broader audience and provide them an enriching experience that goes beyond pure entertainment. **Because youth are increasingly comfortable navigating multiple digital platforms, transmedia edutainment holds promise as a health promotion and education interventional tool** (Singhal, Wang and Rogers 2013). Starting with an underlying SBCC theory, those using transmedia approaches can create a multi-pronged approach by choosing a media channel and messaging combination that is most applicable to the desired type of behaviour change. **This must be based on a thorough study of the media habits and uses of the target audience, however, or messages will be flowing on channels that are not accessible to the core audience or that are not conducive to the message** (Wang and Singhal 2016). Certain media channels, for example, appear to work better for one-way communication, others for interactive engagement, and others for complex learning (Health Communication Capacity Collaborative (HC3) 2013).

The global human rights organization Breakthrough implemented what they referred to as a ‘360 degree’ campaign as early as 2008. *Bell Bajao*, as the program was called, was aimed at ending domestic violence in India. It is an early example of how a multi-pronged, multi-level campaign was used to encourage social and behaviour change at various levels of the ecological model. The campaign, developed by the branding company Ogilvy-Mather, worked through a

blog and social media as well as through traditional media channels like TV, print, radio and a video van. Coupled with the 'air cover' (as they referred to the mass media efforts), Breakthrough also used a 'ground cover' approach through community-based programming aimed at women's right and prevention of domestic violence and engagement of men and boys to 'ring the bell' against domestic violence. The campaign engaged survivors of domestic violence themselves, male members of society (as primary agents of change among peers and networks), and wider society through broad multi-media education and awareness programs (Chakraborty 2010).

The BBC Media Action *Ananya* program in India used a similar '360 degree' strategy to tackle the high levels of maternal and child mortality in Bihar state. Local community health workers were equipped with '*Mobile Kunji*' a deck of cards with advice about maternal and child health. Each card sports a unique code that the community health worker used to access an audio message on her phone that was voiced by the character 'Dr. Anita'. The same character appeared again in a radio show called *Khirki Mehendiwali* (Mehendi Opens A Window) which aired three times a week and reinforced many of the health messages through drama and comedy. In addition, a mobile information service called *Kilkari* allowed families to receive recorded messages from the same Dr. Anita. Lastly, the campaign featured a televised social advertisement called *Ek Teen Do* (One, Three, Two) which stressed the importance of leaving a three-year gap between pregnancies (Swarup 2012) (Bachan 2016).

3. What do current and past digital SBCC initiatives tell us?

Although access to smart phones is increasing, as noted in Section 1 above, those in lower income brackets or who are in other ways marginalized or restricted (due to location, gender or culture) may not have access to the Internet or to a smart phone. For this reason, we cover available literature on programs using low-end, basic mobile phones (e.g., those that can only call and text) as well as that on efforts designed for a more robust, Internet-enabled approach, and multi-media or 'transmedia' approaches. Much of the earlier literature on low-income countries is focused on mHealth and the use of SMS, whereas the early literature on Internet-enabled approaches tends to focus on middle- and high-income countries/contexts.

As access to the Internet, especially mobile Internet, has expanded to more youth in low- and middle-income countries, the literature has followed suit. However, there are still strong barriers to access and use of smart phones and the Internet for many, perhaps most, of the poorest and most vulnerable youth, especially youth in rural areas and girls living in restrictive homes or socially controlled environments. The challenge for MTV *Nishedh* will be to explore ways that basic digital channels can be coupled with more traditional channels such as television and radio, and to future-proof its interventions by testing responsible ways of using emerging channels like WhatsApp, Facebook Lite, or chatbots to enhance engagement and impact.

Some of the main challenges in developing and evaluating digital interventions for behaviour change in health and health care were summarized in a recent article, including: the rapid pace with which technology changes and the need to continually update and adapt; engagement with digital interventions often being too limited to support behaviour change - or the engagement is multidimensional and cannot be evaluated simply by digital means; engagement may be unequal and reinforce disparities or inequalities; there is a theoretical lack of clarity around the mechanisms through which digital behaviour change interventions have an effect; it is difficult to specify meaningful controls or comparators; the complex multi-component nature of digital interventions requires an iterative design and testing cycle; cost-effective evaluation models and techniques are lacking; funding mechanisms are not aligned with digital cycles; there are competing commercial and ethical demands on data ownership and intellectual property; quality and ethical standards are generally unclear or undefined (Michie, et al. 2017).

SMS for health behaviour change

Several studies over the past decade have found that **teens and youth are open to text messaging for health promotion**. In one study on whether SMS messages with reproductive health information were acceptable to Australian youth, the surveyed youth said messages provided new information, a reminder of existing information and reduced their apprehension around testing for sexually transmitted infections (STIs). A randomized controlled trial from 2006-2007 found those receiving SMS and email messages about sexual health improved their knowledge. In the same study, females who received messages were more likely to get tested for STIs than those who did not receive any messages (Lim , et al. 2011) (Gold and Lim 2010).

Prevention information via text message was found to be effective with young people aged 10 to 24 in San Francisco (the SEXINFO project, which targeted at-risk African American adolescents with sexual health text messages) as well as in the Democratic Republic of Congo (the Ligne Verte hotline, which provided confidential information on family planning and contraceptives along with referrals to clinics) (Toth and PSI DR Congo 2008). Text to Change trialed an SMS behaviour change approach, including an SMS-based multiple-choice quiz, in an effort to synergize communication, link with existing prevention campaigns and offer services for HIV/AIDS in Uganda. Findings indicated that it is critical to have an extensive marketing campaign (including radio, billboards, and newspapers), an introductory message with an explanation of the program and how anonymity is guaranteed, a shorter program duration so that people will not lose interest, and various technical improvements (Text to Change 2008) (Mecheal, et al. 2010). (Ippoliti and L'Engle 2017).

A global brief on mHealth for adolescent sexual reproductive health (ASRH) by Ippoliti also found that that **ASRH information provided via mobile is appealing, feasible, and culturally acceptable to youth**; and that it can positively influence youth SRH outcomes by improving knowledge, reducing sexual risk behaviour, and increasing utilization of health services. mHealth programs also offered cost-savings as compared to other types of scaling models. Examples

reviewed suggest that **SMS can enable innovative health messaging, including direct text/SMS messages, role-model story lines, psychosocial support, and counseling.** In a different approach, in Ethiopia, Marie Stopes International sent electronic vouchers (e-vouchers) directly to a user's phone. The vouchers could be redeemed at an affiliated health facility for free counseling sessions on contraceptive methods as well as medical abortion and post-abortion care services. In terms of age, **older adolescents (ages 15 and above) tended to be the main users of these mHealth interventions, with lower program uptake among younger adolescents.** (Ippoliti 2017).

Fundamental and common **challenges with mHealth for ASRH include access, security, infrastructure, functionality and language.** These need to be addressed in design and pilot stages. Content should reflect both the primary languages spoken and the vernacular with which youth feel most accustomed. Because basic SMS is limited to text, it can inhibit robust content provision and fall short in engaging users in two-way communication. Poor network connectivity is a major issue affecting continuity, reach, and quality of SMS-based interventions. **Maintaining the security and confidentiality of user information and data is a major challenge** for mobile and digital interventions. Mobile phones are often shared among family members in lower-income contexts, reducing privacy. This is especially important to consider when addressing sensitive or taboo health topics (N. Ippoliti 2017).

Social media, multi-media and transmedia

A 2013 review looked at 98 research studies on social media for health communication. The methodological quality of the studies was deemed as low - most were exploratory and descriptive rather than focused on methodology. **Six key benefits of social media were found: increased interaction with others; more available, shared, and tailored information; increased accessibility and widening access to health information; peer/ social/ emotional support; public health surveillance; and potential to influence health policy.** Limitations included those related to quality, lack of reliability, confidentiality, and privacy. **Users are largely unaware of data privacy and confidentiality, data security and the dangers of disclosing personal health information online or over via insecure means such as text message** (Moorhead, et al. 2013).

A 2014 study on social media and transmedia's influence on child health covered 10 studies, most of which were focused on multiple-media platforms that were not strictly transmedia or social media per se. There were limited findings that could point to multimedia platforms on healthy behaviours directly influencing child survival. However, the authors did find studies that showed a positive impact on changes in attitudes, awareness, and knowledge. Wider findings included that **behaviour change interventions were most effective when people were engaged on multiple levels;** in other words, when initiatives included "behavioural (performance-based techniques); social (interpersonal and small media); sensory (mass media, materials); cognitive (problem solving)". It could not be determined from the existing studies the extent to which one technique was more effective than another (Higgs, et al. 2014).

Cases to explore further

Four recent **entertainment-education initiatives** aimed at young people that incorporated social media and digital engagement for SBCC are: MTV's *16 and Pregnant*, *East Los High*, *Voices for Change's Purple*, and the Norwegian Broadcasting Company's *SKAM*. These are worth examining further because although they are not a perfect fit for MTV *Nishedh*, they offer various insights on using SBCC theory in the development of EE for youth with a gender focus, incorporating digital aspects into multi-media and transmedia approaches, and gathering feedback and measuring results through digital channels.

16 and Pregnant

This program followed the lives of pregnant teenagers in the United States in the final months of their pregnancy and their first experiences of motherhood. A 2015 study matched Vital Statistics birth data to Nielsen television ratings data to determine whether exposure to the show had an impact on teen childbearing rates. Results implied that the show led to a 4.3 percent reduction in teen births in the 18 months following its initial airing. The **authors believe this can account for 24 percent of the overall decline in teen births in the US during that period**. They supplemented their findings with data from Google Trends and Twitter, which suggested that the show led to increased interest in contraceptive use and abortion (Kearney and Levine 2015).

The show garnered mixed reactions, with critics believing that the show glamorized teen pregnancy by making the women featured into reality stars. A study for the National Campaign to Prevent Teen and Unplanned Pregnancy (Albert 2010) reported that 82 percent of teens who watched the show said it helped teens better understand the challenges of pregnancy and parenthood whereas only 17 percent said it glamorized teen pregnancy.

Researcher, Jennifer Aubrey, questioned these earlier findings, noting that "conclusions are based on correlational results of aggregate data – there was a bigger drop in teen pregnancy in areas where teenagers were watching more MTV programming, not only the *16 and Pregnant* series... They are looking at data at the aggregate level but making assumptions about what is happening at the individual level, saying that *16 and Pregnant* is effective sex education for teens" (Harwood 2014). Aubrey's own study suggests that **those who identified the least with the mothers on the show had the most negative attitudes upon viewing it, whereas those reporting the highest level of affinity and homophily had more positive attitudes toward teen pregnancy**. These researchers also found that **teens who thought they were similar to the pregnant teens were more likely to have a lower perception of their own risk for pregnancy, higher acceptance of myths about teen pregnancy** and a more favorable attitude with regard to teen pregnancy, and that teens who felt a 'friendship relationship' with the teen moms also had a decreased behavioural intention to avoid pregnancy (Behm-Morawitz, et al. 2017).

East Los High

This was a transmedia education-entertainment program aimed at young Latina/o Americans. The program embedded educational messages in entertainment narratives across digital platforms to promote sexual and reproductive health. *East Los High* was developed to reach, engage and influence young Latina/o Americans on the topic of adolescent pregnancy and better sexual reproductive health. One in three Latina adolescents in the US become pregnant before they are 20 years old (1.5 times the national average), yet there are very few effective health interventions aimed at Latina/o youth in the US. (Wang and Singhal 2016).

East Los High aimed to create a culturally sensitive intervention. It was designed to subvert the stereotypes of Latina/o characters as gardeners, maids and gang members. The plot covered realistic issues that young Latinas/os face and offered multiple entry points for Latina/o youth, who avidly consume drama and digital entertainment, through their preferred platform (Jenkins 2006) (Castro 2013) (Lopez, Gonzalez-Barrera and Patten 2013). The team took a **strategic approach based on existing media habits**. Latinas/os are 40 percent more likely than the general population to watch television and videos online or on a smartphone, and 3 times more likely to check (via social media) what programs their friends are watching (Razzetti 2012).

East Los High was available on the Hulu web-streaming site, and at the end of each episode, viewers were encouraged to visit the website where they could access additional transmedia narrative extensions, for example, an extended scene where a character talked with a health counselor about condom use, or a set of video logs from one of the main characters. From any of the extension materials, viewers could visit a resources page, find local health clinics based on their location, or click other links for more information. The transmedia extensions were promoted on Facebook, Twitter and Instagram. Engagement with the show and other materials were tracked through web analytics, viewer surveys, social network analysis and content analysis to understand social dynamics, message framing and user generated content on East Los High's social media sites (Wang and Singhal 2016).

Voices for Change (V4C)

V4C was a very broad program geared towards strengthening the enabling environment for gender equality in Nigeria. It **applied social norms theory at scale and aimed to address structural barriers to gender equality, in particular, discriminatory and harmful attitudes, behaviours and social norms**. V4C sought to change three normative areas: women's voice and leadership, women's role in decision making, and violence against women and girls. The program targeted young women and men aged 16-25 years old and operated in four states in Nigeria for some activities and for others it covered the whole country.

Believing that change needed to happen at scale (e.g., at individual level and also within wider society), the program worked at multiple levels: individual (providing girls and young women with the skills, knowledge and confidence to challenge discriminatory social norms and create change in their colleges, homes, workplaces and communities); community (engaging men and

boys, religious and traditional leaders, and networks of women and girls to create a critical mass of support for gender equality, accelerating change and shifting negative norms); and social-structural level (changing discriminatory laws, creating better policies, directing assets towards women and girls, sending a message about changed social norms through political and legal structures) (Fraser, Ekeoba and Feather 2017).

V4C was underpinned with a Theory of Change (ToC) expressing a long-term (20 year) vision for gender equality. Three domains (Self, Society and Formal Institutions) were the core sites at which change was sought. The domain of the 'Self' is the personal transformation foundation for diffusing changes more widely. The 'Society' domain is aimed at changing social norms at scale and laying foundations for a gender equality movement. The 'Formal Institutions' domain is where legal and policy changes can support and create population-wide social changes. The ToC envisions changes towards gender equality in each domain that work together to amplify and strengthen the broader enabling environment for gender equality (Milward and Nelson 2017).

V4C's program strategy worked at two levels – 'scale' (which targeted young people society-wide in the four states with a branded communications campaign), and 'focused intensive' (which created intensive learning opportunities in both face-to-face and online spaces for key individuals selected for their potential to amplify and promote the change once they had gone through their own personal transformation). Different interventions were designed for each level and these drew on two models of change: a **'scale model,'** which centralized an idea of the diffusion of new attitudes and behaviours concerning gender equality, and social norms change as the catalyst for this; and a **'stages of change' model** where individuals go through different steps of Pre- Contemplation; Contemplation or Awareness Raising; Planning the change / Persuasion; Action; and Maintenance, and which centralized an idea of self-transformation as the foundation (Voices for Change 2017).

The selection of participants for intensive programming was based on **the diffusion model** (Who would be best placed to drive diffusion?) The stages of change model drove the content and immediate objectives for the intensive inputs. A branded communications campaign, 'Purple', worked alongside these to stimulate initial stages of change among a wider population, and prepare that population for the diffusion effects carried forward by key influencers, while also creating a sense of society-wide approval for the changes, as part of the social norms approach. The strategy used a wide range of communications channels with the aim of achieving a layered experience in which individuals were addressed with similar messages through different media / interventions. Some areas were 'saturated' with multiple messages, so that a changing population would be supported, and changes reinforced, from different sources. In short, the media campaign aimed to create the conditions for diffusion. The Purple brand aimed to spread the ideas widely so that diffusion by key influencers would be amplified and accelerated at scale by diffusion via new social norming. Lastly, legal and policy change buttressed these areas, and evidence generation aimed to stimulate discussion and debate. V4C used a range of quantitative and qualitative tools to track results, create an evidence base for strategic mid-program

adjustments, and lay a foundation for understanding outcomes (Voices for Change 2017).

A study to determine brand awareness of Purple showed that it was highest in post-secondary institutions where Purple activities were taking place. Awareness among those outside post-secondary institutions, whose contact with Purple was through media sources alone, was superficial and understanding of the message was vague. **Awareness of the Purple website was very low, at 2% of the total sample, which was problematic given the centrality of the online campaign in the strategy.** There was a **lack of clarity around the Purple “Call to Action.”** Young people did not know what a next step towards action would be for them. Though the site offered examples of actions (talking to a friend, encouraging a relative to speak up) the site needed to be much clearer about what people were supposed to do after exposure to the campaign (TNS 2016).

An endline report (Denny and Hughes 2017) on the V4C program found that large scale changes in young people’s gender attitudes and behaviours took place in the four target states over the 2014-2017 period; however the exact contribution V4C made to improved attitudes and behaviours was difficult to ascertain. There is **compelling evidence that the Purple brand was an important (and likely underestimated) driver of change in almost all areas.** V4C actions in the self and society domains had a positive effect, irrespective of cultural context or the original starting point in a state. **Physical Safe Spaces were found to be particularly effective,** especially given their ability to mobilize young people to diffuse new attitudes and behaviours to others.

Radio was one of the most effective methods of promoting positive gender attitudes and behaviour, especially outside of media-saturated Lagos, and radio was the most successful in reaching poorer groups. V4C intentionally took forward a multi-media campaign to saturate young people with consistent messages from different sources, giving a sense of society wide support for new norms. The program, however, had limited effect in changing young people’s attitudes and behaviours to violence against women and girls. Reasons for this were not clear but could involve people being more aware of what constitutes violence and therefore reporting violence where previously they would not, or it could be that factors other than social norms were strong influencing factors. **Online spaces were not as impactful as hoped.** They require careful moderation to be effective, and even when that is happening, online users are likely to be accessing other websites or social media platforms that are not regulated in the same way, meaning that they are also exposed to counterproductive views and this can undermine the results achieved.

Key learnings from V4C include: that **brand can move young people to change attitudes and behaviours, and potentially take action.** The Purple brand also provided the “glue” for program interventions and created a layered effect that was infused throughout all communications and digital content. The diffusion model can be a useful as a way to frame behaviour adoptions, and **knowledge, skills and self-confidence are important for supporting diffusion of new behaviours.** **Working with men and boys was central to achieving change at scale.** Intensive

program effects seemed to be strongest among men as they were associated with dramatically higher rates of change and positive beliefs compared to men in the general population, suggesting that carefully constructed education about gender in safe, supportive environments has transformative effects particularly among men. Men sometimes responded to messaging more strongly than women, notable in early-stage change dimensions such as contemplation, and this suggests that **differences in the 'starting point' of people engaging with Purple influenced the scale of change**. In challenging contexts (for example, religiously conservative ones), getting messaging 'right' can unlock an even greater scope for change than in less challenging contexts. (Denny and Hughes 2017).

The V4C endline found that **digital approaches significantly helped to get issues of gender equality into public debate, adding visibility and reach to intensive programming**. The **depth of engagement with the content was a critical component**, with implications both for how these tools are used as well as for measurement of their impact. In moderated spaces, attitudes and behaviours changed – likely because people had the opportunity to reflect and debate online. Social media use in general, however, is correlated with less positive individual change related to violence against women and girls, possibly due to other harmful gender messages and imagery accessed online. Together **these findings suggest the need for close moderation of on-line platforms and the need for combining digital approaches with other more intensive communications approaches**, including safe spaces and moderated radio discussions to achieve more consistent changes in attitudes and practices. Another point related to digital is that **using a variety of media tools was important in responding to different targeting objectives**. Online spaces had some bias towards a better educated population – and a more socially connected one. Radio had the widest reach, and was also effective at reaching lower-educated, poorer parts of the population (Denny and Hughes 2017).

SKAM

SKAM was a character-driven online drama series produced by the Norwegian Broadcasting Company (NRK) that aired in Norway and garnered a teen following in the rest of the world. The *SKAM* **storyline was placed 'so close to reality that it could be true'** (Nyborg 2012). The story was revealed daily and in 'real time' on a blog using video clips, chat messages and pictures and the audience was encouraged to comment and engage. *SKAM* **took its lead from digital and transmedia storytelling, integrating multiple texts to create a narrative where 'each medium does what it does best'** (Jenkins 2006) and inviting the audience to be part of the process. *SKAM* built on an earlier online drama series that tried to tackle serious issues and to give teen girls authentic examples of how to cope with life. The Norwegian Broadcasting Company picked up the idea and decided in 2014 to develop a similar concept for an audience of 16-year-old Norwegian girls. The tighter audience target served to more specifically tailor content (Nyborg 2012) (Fladalen 2016).

The team did **extensive audience research with teens all over Norway, including interviews, reports and statistics, social media scanning, and school visits with the goal of understanding**

Norwegian teens and identifying how a new online drama concept could serve their needs (Magnus 2017). The point was to create content that was catchy, relevant and authentic for teens, said the *SKAM* producer; 'It had to have truth and honesty about their own culture, something they hadn't seen anywhere before and couldn't get anywhere else. They had to relate to it and identify with it more than any other series' (Pickard 2016). The resulting show was an online drama series following a cast of teenagers at a High School in Oslo as they navigated life both at home and school. Elements from television drama, sitcom and soap opera were combined to tell the stories (Fladalen 2016).

SKAM was **produced and published across multiple media platforms selected to fit Norwegian teens' natural media habits**. The main place was the *SKAM* website (skam.p3.no) which had video clips, chat messages and pictures published on a daily basis during each season. The key characters also had Instagram accounts. These were used as intermediaries between the fictional universe and the audience, allowing a **'fictional slide into reality', which was the signature feature of the series** (Magnus 2016). On Fridays, video clips were combined into a full episode that was made available on NRK's mobile app and their youth channel. ***SKAM* worked both as an online drama told across multiple platforms and as traditional television. All essential information went into video clips, and other platforms fleshed out the storylines and characters to keep them relevant and in sync with current events'** (Furevold-Boland 2016).

The storyline was **published "in real time" so that it had a continuity that was different from weekly television shows or from binge-watching** (popular on Netflix). The story blended into viewers' real lives, which enhanced the reality-fiction blurring, and the **scheduling was also driven by the story and characters**. For example, in one episode, a character sent another a text message at 17:32, the message was uploaded to the *SKAM* site at the same time (Magnus 2017). This also means that the **publishing was irregular and unpredictable, making the audience check back more often for news or updates**. Users engaged to debate the storyline in multiple places, but of most interest to the producers was the comments section where discussions took place after every update. The *SKAM* team **used the audience comments to adjust the storyline** (Magnus 2017). Fans also discussed *SKAM* on social media. Fan activity ranged from serious discussions of key themes to speculation, selfies, fan fiction, art, memes and gifs. Fan-generated content helped fill in gaps between the updates and allowed *SKAM* to be an ongoing and immersive experience (Atkinson 2016) (Schanke Sundet 2017). (Nyborg 2012).

Virtual versus in-person behaviour change

An unpublished report for Girl Effect from the Behavioural Insights Team (BIT), a group that applies behavioural science and nudge theory to social and governmental problems, explored a series of questions related to the effectiveness of virtual reference groups for behaviour change. They found that there is limited evidence on whether online groups for behaviour change work, but that the evidence that does exist suggests that **online groups can be effective, though engagement and retention may need to be addressed**. Offline groups, peer influencers and

buddies do have power to influence behaviour, though this may be more likely for behaviours that are visible, and it's not entirely clear how this might transfer to the online environment (The Behavioral Insights Team 2018).

BIT's findings include that although participants don't need to know one another to make an online group effective, **behaviour change interventions may be more effective if individuals in the group are more demographically similar (e.g., are part of the same in-group)** (The Behavioral Insights Team 2018). This finding is supported by the earlier example in this paper of *East Los High's* resonance with Latina/os, however, it would be important to consider messaging – in the case of *16 and Pregnant*, the young people who most related to the teenage moms tended to embrace the non-desired behaviours. BIT's review of the literature found four meta-analyses that directly compared digital and in-person interventions for behaviour change. These covered only health interventions and online learning, but based on those limited studies, BIT suggests that **both in person and digital interventions can be impactful, and blended interventions are very promising**. This aligns with earlier suggestions in this paper that multi-media and transmedia approaches are more effective than single pronged ones.

A study in Chile compared in-person peer support and SMS reminders and showed that **digital reminders can be just as effective as in-person ones**. In this study, savings increased among members of groups who met once a week and had to publicly announce their savings commitment. In a follow up study, text messages about savers' progress and the aggregate behaviour of their peers was as effective as savings groups and adding in a 'savings buddy' for face-to-face meetings had no additional effect. The researchers hypothesized that accountability and reminders were important ways to encourage certain behaviours (Kast, Meier and Pomeranz 2012). BIT concludes that **when online and in-person methods are directly compared, success is probably due to overall program and not attributable to a distribution channel** (Behavioral Insights Team 2018). This finding aligns with a wide body of research and practice regarding technology interventions across sectors and countries – in other words, a single technology intervention is usually not enough to claim direct attribution, and there are normally multiple factors in the external environment as well as in program design that influence how effective a particular channel is in terms of behaviour change.

BIT posits that **social media allows for public commitments, and that these can be useful for holding people accountable to each other**. In addition, they note that behaviour and social norms often change because of iterative social referencing. Because digital communication makes reminders and quick communication easy, **reminders have proven to be an important aspect of behaviour change programs** (including when they are incorporated alongside other interventions). BIT recommends that they should be incorporated often into online groups. **Reminders are most effective when they provide feedback on performance, remind a person of their goals, highlight positive social norms, or are signed by a person that recipients know and trust** (e.g. a job center coach, friend or teacher) (Behavioral Insights Team 2018).

Other aspects covered by the BIT literature review include the importance of **supporting introverts or people who may be shy or timid**. Digital groups, they note, might allow introverts to engage more actively than they would in person. They also note that **people are more likely to engage when it is easy**. Moving certain activities online may cut out significant friction costs and barriers and allow people to engage from the places and at the times that are most convenient to them. Lastly, they suggest that **people might be more honest about their own negative behaviours in an anonymous setting**, as they feel less judgment. This can backfire however, if **anonymity leads to less social restraint and more negative engagement** (e.g. bullying, hate speech trolling or harassment) on an online site (Behavioral Insights Team 2018).

4. Good practice and common pitfalls in digital SBCC design

Design of digital SBCC programs must take into consideration a number of aspects, including: users' media and technology habits, engaging and effective messaging, and appropriate and accessible channels for messages. Good practices are summarized below.

Ground efforts in theory

SBCC **programs should be grounded in appropriate, relevant and updated theory**. Often in SBCC programming, there is limited or no attention to behaviour change theory or a reliance on outdated or simplistic theory). Behavioural determinants need to expand beyond the individual level to consider context, environment and inter-personal determinants. Implementers should **find ways to understand and respond to the complexity of underlying determinants of behaviour** (Barnett, et al. 2016).

Understand the target population and the social context (social norms/gender norms)

It is critical to **understand the target population (including their willingness to change)**. More successful approaches are context-specific and rooted in an understanding of current behaviour, its social, environmental, economic and motivational determinants, and potential obstacles to change. Interventions that are more deeply embedded in context may be perceived as more relevant and thus may be more effective in triggering behaviour change. **Knowledge and awareness are usually insufficient for change to occur, and programs need to address wider barriers to behaviour change such as economic and cultural factors** (Barnett, et al. 2016). In a program encouraging voluntary testing and counseling uptake, for example, contributions of mobile health messaging were found to be counterbalanced by the persistence of blaming attitudes and emergence of new sources of stigma associated with anti-retroviral provision (Mecheal, et al. 2010).

Research conducted by 2CV and Girl Effect with adolescent girls in several countries was aimed at better understanding girls' information needs, the researchers created a set of 24 cards with topics on them and girls worked collaboratively in small groups to sort the cards into piles of "I

am not interested in this/don't want this information" "I am interested in this but I already get it" and "I am interested in this and I don't know where to find it." The girls then discussed the cards and prioritized them into their top interests. The researchers were also able to ask probing questions in an aim to determine whether any topics in the "I'm not interested" pile were too embarrassing to talk about in public but might be secretly of interest to the girls in the target group. Additionally, a "secret envelope" was passed around where girls could ask questions that they were too shy to ask in front of other girls, and this information was useful for researchers to then design content in ways that would give girls the information they needed in ways that were adapted to their levels of comfort (Girl Effect and 2CV 2017).

Understand and design for user habits, preferences, and interests

A nuanced understanding of media and technology access and use is critical. This includes the devices, channels, media sources, influencers, data packages, network strength, and other elements that are directly related to whether and how people access and use digital devices, services and platforms. Review of a free information hotline in Madagascar, for example, explored users' channel preferences and the pros and cons of accessing the hotline via IVR, SMS and USSD. Most users wanted to listen to messages, not read them, making IVR more appropriate for the population who had low literacy levels. However, some users wanted to store the information received on their phones, and SMS was preferable in their case. 'Discoverability' was better with SMS messages as compared to IVR, however, meaning more users found out about the service by SMS (Wills, Morain and Baudeau 2016).

Those designing and implementing SBCC programs with digital or mobile components should also **be careful about making assumptions based on high-level data.** 'Ground-truthing' needs to take place so that a nuanced understanding guides design. An example is a program in Sierra Leone where implementers assumed that the more marginalized the community, the lower the mobile phone access for adolescent girls. Since the community had no mobile coverage or radio signal and was strictly Muslim, it was assumed the girls would be hard to reach, however girls had a lot of access to mobile because parents would send girls several miles out of the community with the family mobile to check messages and call family members, and girls would then have plenty of time alone with the phone (Bachan 2016)

2CV and Girl Effect 's research (mentioned above) found that girls' had a rich and varied habits which varied by their location within a particular country (e.g., urban or rural). Relatively wealthier girls in some countries had greater access to mobiles than their out-of-school counterparts, whereas in other countries girls who were wealthier were usually in school and it was considered inappropriate for them to have phones, however girls who were out of school tended to have jobs as well as phones (Girl Effect and 2CV 2017).

Watch out for cost and data limitations

Low income users tend to have very frugal access habits, and SBCC programs aimed at these populations should carefully consider how to minimize data consumption. This means that

programs need to be designed for those who have limited minutes or text messages allowed. Even if they have smart phones, they may be mostly offline and rarely connected. Some popular smart phones come equipped with applications like WhatsApp and Facebook Lite or free Facebook pre-installed, and some data packages come with a certain number of minutes for these specific platforms. Because of this, users may spend most of their time inside of those platforms, making it difficult to reach them elsewhere (de Lanerolle, Walton and Schoon 2017).

Think carefully about language and literacy

mHealth interventions for disease prevention often use text messages for health information, motivating individuals, and encouraging self-management, however **illiteracy can be an issue if basing outreach on SMS** (Mecheal, et al. 2010). **Language can also be a politicizing factor.**

When the V4C program was being implemented in Nigeria, the question came up of whether to use English, Hausa or other local languages. Research with stakeholders, including an online survey, WhatsApp surveys with non-Hausa speakers, review of traffic and engagement data was conducted. In addition, a social media discussion was launched around whether a Hausa website was appropriate for Nigeria or if it would spark political / social issues or feelings of preferences or exclusion. Hausa speakers strongly supported translating the website and its advertising into Hausa. However, Brand Ambassadors and facilitators felt that localization should not be taken lightly as non-Hausa speaker perception of the brand needed to be considered also. In the end, it was decided to keep website in English, but to add key phrases about unity in Yoruba, and Igbo. The brand was also harnessed to send a message of unity. Some local advertising was done in local languages, with careful attention to which language was used in areas that had mixed Hausa-non-Hausa speakers. Additionally, promotional and web images began using a 50-50 split of male and female and Hausa/non-Hausa persons (Every1Mobile 2016).

Determine the right frequency of messaging or engagement

Though SMS-based reminders trigger individuals to think about topics they might not otherwise consciously consider, or only consider at certain times, such as during a crisis, **it is challenging to provide reminders that individuals want to receive without being seen as repetitive, annoying or 'nagging' which will make them be less likely to a) pay attention to the message and b) continue to subscribe to receive the messages.** The timing of message broadcast should be designed to be both acceptable to participants and relevant to the information in the message (Gold and Lim 2010).

Tailor messages to the audience and the individual user

Digital interventions have advantages over traditional SBCC modes because they can be designed flexibly to include interactive components, opportunities for feedback, and conveniently timed messaging to engage different users in targeted ways. **Tailored in the online context means that individualized messages are designed using a pre-assessment of key individual difference variables or characteristics linked to the behaviour change model that is being used.** Tailored messages are more relevant to users and tend to command their attention better and persuade them more effectively. Tailored messaging also users more likely to process

and have a positive perception of educational materials (Lustria, et al. 2013). **Interventions should also be tailored to the target audience, for example, their digital preferences and habits** (Korda and Itani 2013). Levels of engagement and use tend to increase when intervention iteratively modify a platform to reflect emerging trends with adolescents (Baños, et al. 2017). Interventions with multiple, complimentary, focal-themed messages that encourage users to engage with the platform and interact with other users on the platform are recommended (Korda and Itani 2013) (Shane-Simpson, et al. 2017).

Use multi-media and transmedia approaches

Multi-media and transmedia approaches may have better results for more complex behaviours. In the case of East Los High, for example, transmedia yielded significantly better outcomes than did other conditions over time. Though condom promotion messages were the same across all experimental conditions, when they were addressed on the show and also in an extended video clip dialogue with a main character the intervention saw a strong uptick in interest and clicks. (Wang and Singhal 2016).

Build trust and find the right voice and messenger(s)

To maximize likelihood of behaviour change, in addition to messages being novel or engaging, the **recipient needs to believe the sender of the message is a credible source of information** (Gold and Lim 2010). Finding trusted messengers and influencers is a known good practice from pre-Internet days, and it holds true in the digital sphere of SBCC. It's important to conduct research and testing to determine who is the best messenger to carry a particular message to a specific audience, and to develop the right tone of voice or personality for a message or conversation. This could be anyone from a trusted INGO or NGO, a Telecoms company, a government agency; a celebrity, a fictional character developed specifically for SBCC purposes, to friends and families.

Pay attention to framing of messages

Message framing seems to significantly influence message effectiveness. Positively and negatively framed messages around hygiene have led to a significant improvement in hygiene practices, whereas neutral messages led to increased awareness but hardly any change in behaviours (Barnett, et al. 2016).

Prepare with signposting and ensure capacity to respond to demand generated

SBCC programs should **be prepared to respond to any demand that is created by increased awareness and have reliable, trustworthy and vetted online and offline support systems/ services to which users can be signposted.** A community and radio education campaign opened up new channels for reporting child abuse in Benin, for example. Despite early engagement with local child protection services, once reports started coming in local government didn't have capacity to respond to the calls. In some cases, child victims of abuse that had been reported through the programs SMS service were removed from abusive families and placed with local police officers, leaving them open to other potential forms of abuse (Bachan 2016).

Develop engaging content

Buzzfeed² has an effective engagement method that involves **packaging information in concise and esthetically appealing formats**. Good practices for creating engaging content include attracting attention with headlines of eight words -- the suggested number of words for the highest click-rate. Buzzfeed uses a "Bite-Snack-Meal" model where the bite is the headline, the snack is the thumbnail image and short description of the article, and the meal is the full article. Buzzfeed also personalizes content, based on user personas and characteristics generated from click-data research that suggest that certain individuals would choose certain articles. Buzzfeed also allows its readers to categorize and organize articles in ways that are meaningful to them. It features timely content and trending topics that are constantly updated. Lastly, Buzzfeed content is pre-packaged to be easily shareable. This means that readers share more often and become promoters of the Buzzfeed brand. (Manzo 2015) (Shane-Simpson, et al. 2017).

It is possible to engage off-line users through low-end mobiles as well. Gram Vaani's *Mobile Vaani* is described as a social media platform for rural areas. It runs on an IVR system that allows people to call in to leave a message about their community or to listen to messages left by others. The *Mobile Vaani* network covers several states in India and it has proved to be as effective as conventional media and, in some cases, more effective, since in many rural households the mobile phone is the only electronic possession. *Main Kuch Bhi Kar Sakti Hoon* (Empowering Women. Accelerating Change) was a campaign that used a mix of inter-personal, group and mass media channels with an emphasis on incorporating participant voices. An audio version of the *Main Kuch Bhi Kar Sakti Hoon* television series (which focuses on a young woman's ability to break free from her traditional society and become a professional) was created. Each audio episode was followed by a set of questions to initiate and encourage discussion on that particular episode. User opinions were solicited via Gram Vaani, and a diverse set of listeners from various regions, classes and ethnicities engaged in discussions. At fifty-two percent, contributions from women in the Gram Vaani campaign were reportedly higher than in mainstream media campaigns, which hover between twenty-five and thirty percent. Overall, there were over a thousand contributions to the campaign discussion, and almost 29,000 people accessed the content (Gram Vaani 2015) (Gram Vaani n/d).

CGNet Swara is a similar system, designed for sharing news in areas where there is little mainstream media coverage. The voice-based portal is freely accessible via mobile phone, and anyone can report and listen to stories of local interest. Reported stories are moderated and/or annotated or edited by journalists prior to becoming publicly available for playback online and over mobile (CGNet Swara n/d).

² BuzzFeed, Inc. is an American Internet media, news and entertainment company that is well-known for its digital savvy and focus on viral content. Buzzfeed was initially famous for online quizzes, lists and pop culture articles; however over time, the company grew into a global media and technology company offering political, do-it-yourself, animal and business content.

Consider using Internet Messaging Platforms and/or Chatbots

Although messaging platforms only work on smart phones, their use has grown dramatically in recent years. **By 2018, 3.6 billion of people (almost half the world's population) was expected to be using them.** The shift to messaging apps was driven by economics – they allowed users to send text messages at low (or no) cost. As smartphone, Wi-Fi and mobile-internet access has grown, messaging apps have evolved into multi-media hubs that offer users new ways of sharing information and improved data security. A 2018 study notes that people are more likely to open messages that come in via messaging applications than they are to open SMS messages (e.g., they have a high “open rate”). In mid-2016, WhatsApp rolled out encrypted messages as the default, and other messaging apps have followed. This means that the content of messages sent on these applications is not accessible by anyone other than the sender and the user. (ICRC; The Engine Room; Block Party; 2017) (Echo Mobile and Digital Impact Alliance 2018).

Alongside the expansion of Internet Messaging platforms is an increase in the use of Chatbots. Most messaging platforms support bot technology, though the complexity and degree of artificial intelligence of the bot offerings differ. Most bots perform simple functions like as prompting users to press suggested response buttons or replying to users' questions with short answers. **Basic bots are fairly inexpensive to deploy and have no “mind of their own” that could take conversations into unpredictable places.** A number of angles need to be considered if considering using a bot, so user and context research are a critical point when designing or incorporating a chatbot into a program. Aspects of inclusion need thorough exploration as well (Echo Mobile and Digital Impact Alliance 2018).

Budget for moderation of content and comments

Both Facebook and WhatsApp have been used to spread false and misleading information that many believe has influenced election processes, fueled hate and violence, and led to wider divisions on topics like race and gender. Misinformation spread on WhatsApp groups in Brazil is reported to have sealed the win of extremist Jair Bolsonaro in Brazil's 2018 Presidential elections and WhatsApp-spread misinformation has ignited violent attacks and even murder for people in India, Mexico, and elsewhere. (Kayyali 2018). To counter the spread of fake news, in January of 2019 WhatsApp decreased from twenty to five the number of contacts or group chats to which a user can forward a message. Ahead of national elections in India, however, this change did not appear to be having a strong impact. Indian political parties reportedly poured money into the creation of hundreds of thousands of WhatsApp groups to spread political messages, which according to researchers, frequently contain and disseminate false information and hateful rhetoric, especially that fueled by Hindu nationalists (Perrigo 2019).

As the effects of misinformation and disinformation have become more apparent globally, platform companies are being called on to make decisions about speech/free speech and what content is allowed on their platforms (Caplan 2018). **Women and girls in particular also face harassment online, especially when they speak out on gender discrimination or go against social and cultural norms** (Vlahakis 2018) and for this reason, **platforms and digital initiatives**

must ensure that they have sufficient resourcing for moderation that can manage communities and watch for any misuse of the platform or harmful content or comments.

Don't be fooled by vanity metrics

Vanity metrics are those that focus on large numbers of reach or engagement, for example, page views, clicks, or likes as opposed to quality of engagement with content or impact of the content/platform/service. Numbers can be deceiving in many ways, for example, the number of calls received to an IVR line might be quite large, but if the network is weak and the majority of calls drop, then the number of calls received is not very meaningful in terms of impact because very few people will have listened to a recording. If people arrive at a website page and leave immediately, chances are they arrived at the wrong page and did not have interest in the content there, and this should not be considered a sign of high uptake or interest. Identifying solid metrics and understanding from where numbers emanate is critical to designing impact measurement. In addition to numbers and analytics, it is important to determine whether online knowledge or stated intent translates into offline behaviour.

5. Digital Safeguarding good practices

The 'Digital Safeguarding' umbrella covers a) safeguarding when people, in this case, children and adolescents, use digital devices or engage with digital services or platforms; b) data privacy and protection; and c) data security (Raftree 2018a). There are multiple safeguarding areas to consider when engaging adolescents in digital initiatives, including:

- big picture ethical and risk review (is embarking on this effort ethical?);
- safeguarding, informed consent, privacy and security of data collected during formative or ongoing research activities;
- building privacy and data security into platform, product or outreach design;
- ensuring that the benefits of collecting personal or sensitive data outweigh the privacy risks;
- following applicable country and global legal frameworks related to data privacy and transmission across borders;
- protecting and securing any data collected or generated throughout the process
- ensuring a clear handle on how and where data flows and reviewing how partners will manage data privately and securely;
- and considerations around the online experience itself such as safe and appropriate content, comments and moderation, and protection from online abuse, bullying, harassment, hate speech, violence, scams or grooming (Raftree 2018).

Gender dimensions of online harassment, violence and abuse

Online violence and abuse can manifest as sexual, psychological or emotional. Online situations can also lead to physical harm, violence and abuse offline. (European Institute for Gender Equality 2017). There are major gaps in data on the prevalence and impact of online violence

and abuse against women and girls, including gaps in information about the experiences of women in Africa and Asia (Van der Wilk 2018). Research that does exist suggests that women are more likely to experience online violence than men and they face more serious consequences (Powell 2018). Amnesty International found that almost a quarter of women surveyed across eight countries said they had experienced online abuse or harassment at least once (Amnesty International 2017). In addition to high levels of harassment and abuse, women experience more severe forms of online violence than men, including physical threats, harassment over a sustained period, sexual harassment and stalking (Pew Research Centre 2018).

The nature of the digital space, with easy amplification and scale, enables harm caused to survivors to also be amplified. Violence and abuse against women are carried out today at greater distance, speed and rates. Meanwhile, anonymity and encryption protect perpetrators from being known to both survivors and authorities (Aziz 2017). **The most common social media platform highlighted in one study – both for experiencing and witnessing abuse – was Facebook. Other social media platforms where research participants experienced were Twitter, Instagram and YouTube.** Other places where abuse happens included on the internet in general, via mobile phones, and on messaging services such as WhatsApp and email. **Sexual orientation, gender identity, race and age often exacerbate the type of online violence and abuse that women face** (Vlahakis 2018). For example, Loom Nepal reported that 100 percent of transgender respondents to their study reported having been subjected to violence online and 84 percent of respondents who identified as gay, lesbian, bisexual, or other non-heterosexual orientation had been subjected to online violence. **A disproportionately high number of people reporting online violence in the study identified as lesbian, gay, bisexual or trans (LGBT) or Dalit.** Online harassment and abuse often lead to self-censorship and the silencing of women (LOOM Nepal 2017).

A 2018 report on girls' perceptions and experiences with mobile phones shows that girls across different countries are acutely aware of 'safety' as an issue when thinking about mobile access and use. While girls were positive about the role of phones supporting their safety, they also pointed out that they and their parents had a number of safety concerns and fears, for example, that phones could be a gateway to 'bad people,' namely, boys and men, or other girls who could be a bad influence. Girls and boys also said that mobiles can lead them to dangerous information and imagery such as pornography and 'bad messages' that upset them and 'corrupt' their moral being. Other fears that girls specifically mentioned were exposure to 'sugar daddies'; watching pornography, which 'tempts' girls into trying sex; being tricked into meeting men and boys for sex, or even providing the opportunity for them to be put under a spell and seduced. (Vodafone Foundation and Girl Effect 2018).

Emerging privacy regulations

The European Union passed new data privacy regulations in May of 2018 called the General Data Privacy Regulation (GDPR). This overarching framework has set the bar for a rights-based

approach to data privacy that places a greater amount of control into the hands of ‘data subjects’ whose data is collected and used by ‘data controllers’ and ‘data processors.’ **Though the GDPR does not apply to all countries, it does require companies wishing to target EU citizens with offers and services to comply. The legislation also covers EU-based entities that are collecting data in other countries.** Rights and principles contained in the GDPR include concepts such as personal data; sensitive data; legal bases for data collection; legitimate purpose for data collection and use; informed consent; data minimization; and rights to rectification, erasure, information about how personal data is being used, and rights to refuse or restrict profiling on the bases of data (European Union 2016). The GDPR mandates particular attention to data privacy and ethics when working with children, including the stipulations around parental consent and special privacy considerations for the data of children (UK Information Commissioner's Office 2018). **Many development organizations are making efforts to adopt the philosophies of the GDPR due to the belief that all people deserve the same data privacy rights, and that these are especially important for vulnerable groups who may face even greater risk if data privacy is breached or their data is abused or accidentally lost or leaked** (Porter, et al. 2018).

India is in the midst of changes to its privacy laws, with proposed rules that would amend Section 79 of the country’s IT Act, the primary law on online commerce and cybercrime. If these amendments are approved, platforms like Facebook and Twitter would be required to censor content that the Indian government considers inappropriate. This move could also affect how content is served outside Indian borders. The amended law would also require social media companies to offer up user messages at government request. This is a challenge for end-to-end encrypted services like WhatsApp, which has specifically encrypted messages in an effort to assure users that their personal messages are safe from corporate or government eyes (Kelly 2019). **MTV Nishedh will need to review its legal obligations with regard to privacy laws for the EU, US, India, and any other country where data might be collected, transmitted or processed by partners or sub-contractors.**

Digital Safeguarding and Responsible Data in the civil society space

Digital safeguarding and responsible data management have emerged as key concerns and areas of focus for those implementing programs that include digital data, digital platforms or digital content. While digital platforms themselves traffic in user data, **development practitioners and human rights activists have become increasingly vocal about the need for greater attention to how data from vulnerable or at-risk populations is collected, transmitted, used, stored and shared and how online spaces can be protected from manipulation, hate speech and abuse.**

The concept of *Responsible Data* emerged some five years ago out of efforts by The Engine Room and other interested partners. **Responsible data is defined as “The duty to ensure people’s rights to consent, privacy, security and ownership around the information processes of collection, analysis, storage, presentation and reuse of data, while respecting the values of transparency and openness”** (Responsible Data Forum 2014).

A list of ten recommendations to enhance data privacy was developed for the design phase of the Girl Effect Mobile platform to help ensure girls' safeguarding and to address technological, cultural, legal, and contextual risks as well as to ensure that reputational risks, trustworthiness, online abuse and data privacy and security measures were mitigated. These included aspects like assessing risk to girls at various levels, including technology, culture, legal, contextual, trust/abuse/reputation, data and privacy breaches and data ethics; understanding digital privacy and safety from girls' perspective in each context before design; working with girl groups to identify privacy, security and reputational risks, to design and develop of safety and security protocols; to flag new risks that arise during implementation, and to adapt and iterate around safeguarding approaches when new concerns arise. Another recommendation was to assign or consult with a digital security expert in each pilot effort to conduct a privacy impact assessment and recommend contextually specific approaches and design elements that are relevant to each context that can later be filtered up into a global safeguarding approach. The guidance recommended following legal guidelines that apply in the various countries of operation or reach and establishing organizational policies and standards on data collection and security, including Privacy by Design standards. Training for staff on potential risks and organizational liabilities, accountability processes, responsibilities and consequences for privacy breaches were also recommended, as well as training for local partners and allies (Raftree 2016).

A number of other guiding documents exist to support practitioners who are thinking through these areas. A set of relevant policy and guidance for the development and social impact field were assembled on the "Responsible Data Hack Pad" by a group of Responsible Data enthusiasts as a resource for the MERL Tech conference in 2016 and subsequently turned into a living document that is continually updated as new research and guidance arise (MERL Tech Participants 2019).

6. Monitoring, evaluation and learning for digital SBCC

As noted earlier in this paper, the evidence base on digital SBCC is somewhat weak. Higgs et al., when referring to the mHealth, social and transmedia approaches, and behaviour change evidence base, recommend that future studies adopt rigorous designs and endpoints. **The evidence base needs to be systematically built to avoid wasting resources and enable comparisons across studies, modalities, and outcomes.** Additionally, data analysis and reporting on these types of programs should systematically articulate basic implementation information, such as the type of media platform used, the content presented, media distribution and reach, consumer exposure, and other specifics related to the media interface. Additionally, they identify a need for qualitative studies that provide a richer understanding about how cultural factors shape the adoption and success of new technologies. They recommend that qualitative studies examine how behaviours and social norms interact and how social norms shift in important ways due to the infusion of new technologies in the community, and

differences in role definitions brought about because of new technologies (Higgs, et al. 2014). Below are highlighted some cases that may provide ideas for how to design the MEL for MTV Nishedh. Additionally, some newer tools that could be incorporated into MEL are covered.

16 and Pregnant

The evaluation team matched Vital Statistics birth data to Nielsen television ratings data to determine whether exposure to the show had an impact on teen childbearing. They implemented an instrumental variables (IV) strategy using local area MTV ratings data from a pre-period to predict local area 16 and Pregnant ratings, and also introduced event study methods, using the specific timing of the show's introduction to identify a causal effect. Those **findings were supplemented with a review of data from Google Trends and Twitter** that suggested that the show led to increased interest in contraceptive use and abortion, as captured by internet search and tweeting behaviour (Kearney and Levine 2015). As noted earlier in this paper, these results were questioned by researcher Jennifer Aubrey who concluded that they were based on faulty analysis of correlational results from aggregate data, and that in fact the show had nuanced impacts. Girls who identified with the main characters had more positive attitudes about teen pregnancy than girls who could not easily relate to them (Behm-Morawitz, et al. 2017).

East Los High

Evaluators used a mixed methods approach including analytics tracking to assess audience reach, which monitored Web traffic to the East Los High Web site and to NGO partners' Web sites and widgets; a viewer survey to assess narrative engagement and intended outcomes; and a laboratory experiment with non-viewers of East Los High to compare the effect of transmedia edutainment with other forms of narrative presentation. Complementary methods included social network analysis and content analysis to understand the social dynamics, message framing, and user-generated content on East Los High's social media presence and participant observation and in-depth interviews with young Latino couples to reveal East Los High's influence on their sexual decision-making.

More specifically, the team collected anonymous unobtrusive tracking data through Google Analytics to capture East Los High audience reach during the pre-program publicity, the premiere of season 1, and after season 1 ended. The team recorded the number of visitors, number of page views, average duration of page views, and geographical location of visitors. Using a geographical information system software, they generated spatiotemporal dynamic visualizations of the geographical diffusion of *East Los High* web site visitors over time. NGO partners Planned Parenthood and StayTeen.org independently monitored and shared the statistics of their Web traffic and health service widgets on the *East Los High* website.

An online survey was embedded into the *East Los High* web site and promoted on social media with custom incentives. Participants answered closed- and open- ended questions about their

impressions of the program, engagement with its narrative elements, interpersonal discussions about the show, and knowledge, attitudes, and behavioural intentions related to sexual and reproductive health. The evaluation team derived measures of audience experience from established scales of transportation, identification, and narrative engagement.

The team used a partial factorial design to test the effect of different storytelling formats on the show's target audience. The content was selected according to the program's objectives, and the messages were identical across all experimental conditions. Repeated measures of narrative engagement, knowledge (of correct use of condoms, birth control pills, and emergency contraception), attitudes (on sex education, women's right to choose abortion, the importance of HIV testing, the importance of sex communication), and behaviour (used protection during last instance of sexual intercourse, engaged in sex communication) occurred at baseline, posttest and a 2-week follow-up (Wang and Singhal 2016).

Voices for Change (V4C)

A Theory of Change (ToC) was developed as an iterative tool guiding the design and evolution of the V4C program and to help organize and develop thinking throughout the program team about what was expected to happen, and why specific interventions were expected to have the desired effects. The ToC represents a development of the socio-ecological model of change used in other social science contexts and depicts three domains of change in 'Self', 'Society' and 'Formal Institutions' where V4C delivered different types of intervention.

- **Self:** Young women, young men and a number of 'key influencers' were expected to acquire knowledge and skills about gender equality through program courses and other activities –virtual and physical – which used transformational methodologies to inspire deep personal change and commitment.
- **Society:** A 'rising tide' population of general members of society not directly targeted by the program was expected to undergo change in knowledge, attitudes and practices in areas key to gender equality (e.g. women's leadership, women's decision-making and VAWG). The change would happen through **social norms change** stimulated by a media campaign and other media tools to generate messages, as well as images/depictions of new social norms. 'Key influencers' were expected to contribute to this social norms change by discussing gender equality among their various constituents/listeners and putting forward alternative norms.
- **Institutions:** V4C activities targeted changes in the law, policy change, changes in government planning and budgeting processes, and changes in women's political leadership brought about partly by working on commitments within political parties.

The personal transformation in the 'Self' domain is rooted in the Stages of Change model of change. The activity in the 'Society' domain draws on a 'diffusion' model of change which explains how change at individual levels spreads through society (Milward and Nelson 2017).

Springster

This is a mobile-first global platform that digitally connects marginalized and vulnerable girls around the world. It features content designed for girls and created by girls, aiming to put essential, tailored information directly into their hands, and to help girls find meaning and strength in each other's experiences. Girl Effect commissioned 2CV to help them **understand real South African Springster users' local contexts and challenges, user journeys to the service, overall user experience, and girls' views on existing local content.** The research also explored **overall user engagement and *Springster* impact – including changing knowledge, attitudes and practices – and whether this varied for different types of users.** Because *Springster* target users are primarily based in urban areas, this research took place in the Johannesburg area, which had the most responses to the recruitment survey. Girls were recruited from the *Springster* site by sampling registered users via an online survey which appeared at the top of users' platform page. The sample frame was limited given the number of girls within reasonable geographic ranges for research purposes and whether the participant could be contacted. The sample include 14 to 18-year-old users across a range of demographics and usage experiences – including those in the early stages of platform exploration (1-2 visits) and dedicated long-term users (6+ visits). Despite not explicitly sampling for vulnerability, all users included in this research met 1 or more of the *Springster* target vulnerability criteria – with most participants meeting 2+ criteria.

The approach began with depth interviews with the 'seed respondent' – the *Springster* user. First researchers conducted deep-dive exploration of the girl user's context, pathways to *Springster* use, engagement and user experience, and impact on knowledge, views and behaviour. Where possible, they then conducted depth or paired interviews with friends and family from the girl's wider social network – including friends and/or family members. These interviews triangulated data around the girl's ambitions, challenges and support needs, and behaviour or attitude changes, and views on *Springster*. In total, the team conducted 20 in-depth home interviews, 10 in depth family or gatekeeper interviews, and 15 friendship interviews.

Additionally, girls' digital repertoires were researched, including the handsets they use and how they use and access data, the costs and kinds of mobile and data plans, the platforms and apps they use, information they seek from the Internet, how/how often they access Internet, how they find the *Springster* platform, what they do on it, their expectations of the platform, use patterns, emotional/intellectual engagement with the platform, their perceptions of 'who the platform is for', the user interface and how they navigate it, and aspects related to the site's content, tone, voice, and interactivity.

Lastly evaluators looked at how girls share information and knowledge gained from the site, the influence or impact of the site on users (both highly engaged users and "lurkers") and measured early impacts in confidence, knowledge, feeling less alone, and relationships with family and friends (Jacobs and Upton 2018).

In addition to the focused research highlighted above, Girl Effect is using a range of methods to better understand how users' engagement and participation relate to changes in girls' lives before and after they read content on *Springster* and engage in conversations with other users. **Using different data sources, such as Google Analytics, comment analysis, online surveys and social media analytics, the team is combining big data with traditional approaches to learn more about the intersection of digital behaviour, participation in community spaces and engagement with content and how participation in this online safe space influences change.** (Abreu Lopes and Bailur 2018).

HNI 3-2-1 Program

This program offered mobile phone users in Madagascar access to information on a number of topics and themes, including gender and gender-based violence through IVR line, SMS or USSD (which is similar to SMS, but users can have a back-and-forth conversation). Midway through the project, a user journey evaluation was conducted as well as a business model assessment to see if the program could find a way to become sustainable without supplemental funding.

Core questions asked during the user journey evaluation included:

- Where are the bottlenecks in the customer journey?
- What are the drivers of repeat usage? What is the most effective content?
- How can we determine which users are more valuable for a mobile operator?
- What is user willingness to pay for the service?
- What gender is using the service? What content is most effective by gender?
- How do marketing/promotional activities impact 3-2-1?

Business model questions included:

- How can we tackle the bottleneck in the user journey?
- What is user willingness to pay? Is there a good B2C model?
- How can HNI better use their data to support their cost structure?
- How can HNI strengthen ties with all key partners who are critical for business model?

The three channels (IVR, SMS, USSD) were monitored to determine their uptake and effectiveness, where customers were getting stuck in the user journey, at what point they become engaged and repeat users (or why they didn't), user interface testing, the value of different types of customers (cursory and repeat customers). Customers were segmented by type of user and where they were in the user journey.

By focusing on the listening behaviour of users and determining how many are 'engaged' (those who listened to the majority of a message) the team could assess how many users in the base used the service in a way that could create real value. If behaviour change was to happen, it was a pre-condition that the user have listened to a message in full, therefore only 'engaged users' could be expected to exhibit the relevant changes in behaviour.

Using data analytics to understand trends and engagement across content areas, the team could assess which content areas gain the most hits (initial demand) and then to assess levels of attrition versus those users who had truly engaged with the content. User testimonials were layered over the analytics to compare and understand (ground truth the numbers). Based on the data, a hypothesis around what is creating any barriers to use can be created, and the design of the service could be carefully adjusted, and each change in design of the platform/service could be tested to see if user engagement improves (Wills, Morain and Baudeau 2016). As noted above in this paper, this type of monitoring and assessment is aimed at understanding and improving elements of platform or site design, not evaluating overall impact of an initiative.

ICT tools and technology approaches for MEL of SBCC interventions

Social media comments analysis for social norms research

One study sampled 2872 obesity-relevant comments from three years of interest from a multi-topic online message board and conducted an inductive thematic analysis to identify key themes. The comments analysis allowed them to better understand obesity stigma, dominant representations of obese persons, experiences of explicit stigma, the social and psychological repercussions of overt stigma and norms regarding the perception of obese bodies. **The results highlight the richness of data available via social media interactions as a window into naturally-occurring discourse** (De Brun, et al. 2014).

IVR for Monitoring and Evaluating Media Interventions

A pilot study was implemented in Rwanda with VOTO Mobile to determine whether mobile phone technologies can amplify the reach of radio programs and streamline monitoring and evaluation of radio programs. IVR was of interest because it offered the possibility of collecting large quantities of qualitative and quantitative data at low cost because mobile phone users could be asked automated questions through their phone, thus avoiding face-to-face interviews. IVR was also seen to offer benefits beyond SMS data as it could collect voice data. The study used IVR both to distribute content and to collect data from listeners, through a survey that listeners heard at the end of a radio program.

Collecting data on media content via the mobile phone survey was found to have disadvantages. The survey was set up so that only those who had listened to the content would receive the survey, and this made it impossible to compare with those who did not hear the content. Survey questions needed to be simple and brief so that recipients would understand them and be able to answer them, and listeners must be willing to stay on the line through the end of the survey.

For these and other reasons, the study concluded that **IVR is unlikely to offer a full replacement for more rigorous evaluation methods. IVR does offer several M&E benefits however, in that it can allow project implementers monitor how listeners are experiencing programs, track mobile phone reach (the number of listeners who listen through their mobile device), gauge**

knowledge (whether the messages provided by the program are properly understood), and obtain feedback on program content (engagement with program, enjoyment, desire to listen in the future, identification with/ likability of characters, open-ended feedback, etc.). All of this information can be used throughout a project to improve design and understand impact.

Additional findings include that despite the promising attributes of IVR, the **technical limitations of the tested IVR system and the resulting cost of gathering the data were too great to warrant a recommendation of the platform for conducting joint quantitative and qualitative M&E, at least for organizations without in-house expertise in computer programming.**

Findings suggest that IVR technology is not sufficiently developed to support M&E efforts that combine quantitative and qualitative feedback. **IVR could, however, be used as a part of formative evaluation and periodic monitoring to get a sense of how a project is doing and where tweaks might be made** (Kraidy 2016).

Another study of VOTO Mobile was aimed at analyzing whether mobile phone-based surveys are feasible and cost-effective for gathering statistically significant information in four low-income countries (Afghanistan, Ethiopia, Mozambique, and Zimbabwe). In this case, results showed that the **cost of a typical household survey could be reduced by more than 90 per cent and, with care, mobile surveys can be a feasible tool to replace more time-consuming and expensive approaches.** Lessons from the exercise included that unless there is special attention to detail, mobile survey response rates can be lower than expected and they often exclude the voice of poor and vulnerable groups. Inclusion can be improved by using voice messaging instead of SMS, offering a choice of languages, creating a retry pattern to ensure receipt, providing a call back channel to capture calls that have been missed, using longer introductions to surveys to provide more context, choosing a female voice, and paying close attention to the time of day of calls (Leo and Morello 2015).

Using Internet Messaging platforms for MEL

In 2016, ahead of South Africa's municipal elections the Africa's Voices Foundation partnered with Livity Africa to evaluate the impact of a campaign to encourage young people to vote and highlight issues that mattered to them. They used online surveys of young people, conducted via email and through WhatsApp and Facebook Messenger, and social media posts. WhatsApp and Messenger were selected because of their popularity among youth. It was felt that WhatsApp groups encouraged conversations that would yield particularly useful feedback because the data that can be gathered is rich, authentic, and provides insights into socio-cultural beliefs and behaviours. There were concerns, however, about privacy when using both Facebook Messenger and WhatsApp. **Although the team sought consent and stored the data securely, they did not feel confident about how the data might be used by the platforms. This was of particular concern because youth were asked for personal information like voting and demographics. The organizations have decided that they would not use these platforms in the future unless privacy risks are fully understood before starting** (ICRC; The Engine Room; Block Party; 2017).

Another challenge with using messaging apps is the potential for bias. Relying on data gathered solely through one app risks introducing statistical bias into analyses of a particular issue. Biases are related to differential access to the internet and mobile phones which affects representation of different populations and potentially reinforcing inequalities. This type of bias could also exacerbate blind spots: for example, reports collected through messaging-app data might give the impression that an event or situation was concentrated in a particular part of a country, without taking account of network outages or limited internet access in other parts of the country. Additionally, women may not be able to access or submit data over a messaging app without the approval of a man in their household. (Though it should be noted that this is true for many ICTs and feedback initiatives) (ICRC; The Engine Room; Block Party; 2017).

Big data and evaluation

When behaviour change programs are carried out on multiple platforms that generate data, it is possible to employ Big Data methods to conduct research, monitor and in some cases evaluate them. Global Pulse, for example, used digital data to understand conversations about contraception and teenage pregnancy among Ugandan youth, and to analyze their perceptions towards different types of contraception. Data for the study was extracted from public Facebook posts and UNICEF's *U-report* platform, an SMS-based polling system for Ugandan youth. The analysis was visualized in an interactive dashboard that offered snapshots of the conversations about different methods of contraception over time. It also visualized popular discussion topics associated with contraception and teen pregnancy. **The study showed that there is potential for digital data to help track attitudes and perceptions about reproductive health and rights in real time, which could support monitoring and evaluation of development programs.** (UN Global Pulse 2014) (Abreu Lopes and Bailur 2018)

In another example, Well Told Story conducted sentiment analysis on millions of digital media exchanges among fans. The analysis produced insights on the power of collective discussions to stimulate massive normative changes around contraception. A longitudinal panel study linked the normative shifts to behaviour change at scale. Well Told Story is a research and media company working on social and behaviour change in East Africa. The agency produces a free, data-driven, multimedia (comic, radio, events, digital media) brand called *Shujaaz*. As a component of the *Shujaaz* media, guided, dynamic digital conversations among *Shujaaz* fans on Facebook, WhatsApp and via SMS create a rich dataset that helps inform learning and strategy (Well Told Story 2017) (Abreu Lopes and Bailur 2018).

Although there are emerging examples of how big data could be used to evaluate SBCC, there are plenty of limitations including concerns about its use. **Careless interpretation of big data might lead to disproportionate representation of those who are able to access and use the Internet and leave big data trails.** Use of big data requires adequate normative frameworks, protection of privacy, and risks and harms mitigation for individuals and groups of individuals. Access to big data has proven to be challenging, and it requires technical knowledge, skills and

budget to retrieve, handle and store it (Abreu Lopes and Bailur 2018).

7. Conclusion

The evidence base related to digital social and behaviour change communications is growing and becoming more robust, yet there is still a need for more theory-based approaches and for on-going research and evidence building to better understand the complex nuances of this space. Digital tools and social media are a natural fit for SBCC because rich and multi-layered approaches tend to have a greater impact on behaviour change.

At the same time, the process of creating and finessing a digital SBCC approach is a complex one that depends on factors at the individual, family, community, society levels, as well as media context and access to digital devices, channels, platforms - and skills to navigate them.

Digital SBCC practitioners must be aware of the potential paternalistic and manipulative sides of digital behaviour change approaches both for ethical reasons and because new and emerging legislation provides greater rights to data subjects in the area of data privacy, protection, security and protection from digital profiling.

A number of good practices have emerged from the literature and from known good practice in the fields of behaviour change, digital development, communication for development approaches, and commercial tactics for using digital to engage different populations in effective ways. These must be framed in strong approaches to digital safe-guarding to ensure that ethics, data privacy, data security, and overall child protection aspects are maintained.

Several creative approaches to using digital and social media for SBCC have emerged over the past five years. They work through a number of channels and platforms to create transmedia approaches that are cemented in youth interests, contexts, needs and media / digital habits. Closer review of these efforts offers much learning that can be applied to future SBCC efforts that utilize social media and digital tools and platforms.

An interesting challenge is how to create lively and engaging transmedia approaches that rely on lower-end tools and that engage users who have little to no Internet access. The trick will be to take ideas from high-powered digital approaches and adapt them to low-tech environments in ways that are highly engaging for young people. In addition, there is a need to design MERL approaches that take advantage of transmedia touch points where participant opinions and other data can be collected and used to inform and shape the course of on-going activities.

This paper aims to stimulate ideas on how to address these challenges so that digital SBCC initiatives can be implemented and evaluated more effectively and with greater impact.

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