

Norms-Shifting on Social Media: A Review of Strategies to Shift Health-Related Norms among Adolescents and Young Adults on Social Media

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Abstract

With rapidly growing adolescent engagement in social media globally, social media platforms (e.g., Facebook, YouTube, Instagram, TikTok, etc.) provide increasing opportunities to address and shift social norms that influence health-related behaviors among adolescents and young adults. Numerous social and behavioral change (SBC) interventions have applied strategies to shift norms on social media, and yet, no standard definition of social norms-shifting on social media seems to exist. In understanding how social media can be leveraged to contribute to norms-shifting, we need to look at how global public health interventions are designed, how social media strategies are implemented, what behavioral change theories drive them, and how they stimulate or affect processes that shape social norms and behavior change. This review makes an inventory of the numerous strategies that development organizations have used for norms-shifting among adolescents and young adults on social media – either as stand-alone interventions or in the wider context of multi-layered SBC programs. By categorizing strategies along *visibility* (open vs. closed social media) and *approach* (aimed at the individual level vs. community level), we propose a typology and identify evidence gaps for the working mechanisms behind these strategies to be further unpacked in future research.

Suggested citation: Lutkenhaus R. O., McLarnon C., & Walker F. (2023). Norms-Shifting on Social Media: A Review of Strategies to Shift Health-Related Norms among Adolescents and Young Adults on Social Media. *Review of Communication Research*, 11, 127–149. <https://doi.org/10.5680/RCR.V11.5>

Keywords: social norms; social media; behavioral change; adolescents and young adults; public health

Editor: Giorgio P. De Marchis (Complutense University of Madrid, Spain).

Reviewers who accepted to sign their review: The reviewers prefer to stay blind.

Received: August 9, 2022 **Open peer reviewed:** December 2, 2022 **Accepted:** December 23, 2022 **Published:** May 10, 2023

Highlights

- Social media platforms provide increasing opportunities for development organizations and SBC professionals to understand and address health-related social norms among adolescents and young adults.
- This review makes an inventory of global public health programs and proposes a typology of strategies to shift norms among adolescents and young adults on social media.
- The strategies are mapped onto a framework that distinguishes between intervention approaches and various levels of visibility on social media.
- This review identifies knowledge gaps and informs future research to build an evidence base for health-related norms-shifting among adolescents and young adults on social media.

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Norms-Shifting on Social Media: A Review of Strategies to Shift Health-Related Norms among Adolescents and Young Adults on Social Media

Social norms are unwritten “rules” governing behavior shared by members of a given group or society. They are informal, often implicit, rules that most people accept and abide by. In contrast to individually held attitudes or beliefs, a social norm is defined by beliefs that are shared about a behavior or practice. They influence what people do and are expected to do. Social norms can shape behaviors related to sexual debut, gender-based violence, and early marriage; and affect people’s access to the education, services, and information they need to protect or improve their health and well-being. Research shows that investing in social norms change at the community and individual levels – while ensuring supportive policies and access to high-quality services – can bring about significant improvements in health and well-being (Family Planning High Impact Practices, 2022).

The Passages project (2015–2022) was a USAID-funded, seven-year implementation research project that aimed to address a broad range of social norms, at scale, to achieve sustained improvements in family planning and sexual and reproductive health, such as gender-based violence or unintended pregnancies. Through various technical events and workshops, unexplored questions continue to emerge; one such question is whether, how, and to what extent social norms can be shifted through and on social media platforms, with a focus on adolescent global health programming. This article seeks to build upon and advance the efforts to understand social norms and norms-shifting interventions to contribute to a growing discussion on how norms are formed and shifted through social media strategies.

Social Norms, Social Media, and Adolescents

Social norms, as perceptions of social expectations of typical and appropriate behavior within a valued reference group (Mackie et al., 2015), can dictate what people in a group believe is typical (normal) and appropriate (approved) behavior. These ideas represent two types of social norms: (1) *descriptive norms* are expectations about what people do, and (2) *injunctive norms* are expectations about what people should do, as well as perceived consequences of adhering

to a norm or not (Rimal & Lapinski, 2015; Rimal & Real, 2005). Individual behavior is influenced by both descriptive and injunctive social norms. Within this framing, descriptive norms hold a direct influence over behavior, as people are more likely to engage in behavior that they perceive to be common. Group identity and the perceived benefits or detriments of engaging in a behavior (also called rewards or sanctions) impact the influence of injunctive norms over behavior. In addition, agency, self-efficacy, and the broader enabling environment play a role in determining the uptake and continuation of a behavior. Altogether, behavior is further influenced by how diffusion of messaging occurs across levels and channels and in and out of communities (Rogers, 2003). Understanding how social norms affect adolescent behaviors online and on social media represents a new challenge.

Situating norms-shifting programs at the community level

There are many examples of programs in public health that have been effective in shifting social norms, for example, community-based initiatives or mass media initiatives. Many of these programs often seek to correct misperceptions using strategies such as small group interventions, informational campaigns, and/or mass media (Kesterton & Cabral de Mello, 2010). Other mechanisms for norm change include legal reform, role modeling, and efforts to change power dynamics (Lippman et al., 2013; Muralidharan et al., 2015). Effective norms-shifting programs may not look the same, but are often multi-level, informed by protective norms (IRH, 2020) (those building on existing positive values), and rooted in contextual information. Multi-level programs draw foundationally from the social ecological model, which stipulates that individuals are embedded in environments with multiple levels of influence (Bartholomew Eldredge et al., 2016). Multi-level programs may aim to influence intrapersonal factors, including an individual’s behavior, attitudes, and agency; interpersonal and group processes, including broad social networks as well as family units and schools; and community factors, which encompass relationships between both informal and formal networks within community structures (Falb et al., 2014; Stern et al., 2015). Within this framework, programs draw from various social and behavior change (SBC) theories to shift norms. Social

media provide a new environment that can be addressed in multi-layered SBC programs.

Where do Social Media Interventions Fit in?

Media behaviors of today's audiences have diversified (Hasebrink & Hepp, 2017; Kim, 2016; Taneja et al., 2012; Webster & Ksiazek, 2012). Across the world, audiences are drawn to various online platforms, apps, and online communities to consume and exchange media content on a diverse range of topics, including health (Alleyne, 2015; Blank & Reisdorf, 2012; Jenkins et al., 2013; Livingstone, 2015). With rapidly growing adolescent engagement in social media globally (Arora, 2019), social media platforms (e.g. Facebook, YouTube, Instagram, TikTok, etc.) provide increasing opportunities to address and shift social norms. For example, various studies have demonstrated that social media content and engagement can cover health, reflecting and reinforcing ideas within communities of social media users (Fowler et al., 2021; Harris et al., 2021; Hodgson et al., 2019; Russell et al., 2021). Research also shows that engagement with social media content can affect knowledge, attitudes, norms, and thereby affect behaviors – positively as well as negatively (Chin et al., 2021; Iskarpatyoti et al., 2018; Lewis et al., 2018; Purba et al., 2021; Wombacher et al., 2017). For example: a study found that pictures of unhealthy sleeping environments for infants on Instagram received more likes (approval; injunctive norm) and may therefore be posted more frequently and perceived as common behavior (what most people do; descriptive norm), influencing young parents to adopt unhealthy sleeping environments for their infants (Chin et al., 2021). Furthermore, a content analysis of sexual education content on TikTok shows that social media platforms provide opportunities to address and shift social norms: the themes that were addressed in social media content covered topics not addressed by most sexual education programs in schools: female anatomy, sexual pleasure, and female orgasm (Fowler et al., 2021), potentially affecting descriptive norms impacting these topics. Although most of the studies to date focused on analyzing user-generated content (i.e., pictures and videos that were not tied to any larger program or intervention), they illustrate how social media content can affect norms and may be leveraged by development organizations to proactively influence them.

Social norms, visibility, and algorithms

On social media, development organizations have less control over how and what content ultimately arrives at the end-users' screens: compared to mass media, it can be more challenging to reach and engage audience members. What content is seen is often the result of a dynamic interplay between individuals' social networks, social media algorithms and human behaviors (González-Bailón, 2017; Helmond, 2015; Mukerjee et al., 2018; Pariser, 2012), and social media content varies from being visible publicly (on 'open' social media pages) to privately (on 'closed' social media pages or [group] chats). For example, media content that is posted on open sections of social media platforms – such as public Instagram profiles, YouTube channels, or Facebook pages – is often only added to the timelines of those pages' or persons' most faithful followers before being shown to larger proportions of followers, and only if the initial group has shown positive engagement (e.g., 'dwell time', likes, comments). Simply put, when audiences directly engage with social media posts, algorithms may extend the exposure of these posts to peers in the engaging audiences' social networks. This works similarly for closed profiles or pages, while in (group) chats, messages become instantly visible to all members without the interference of algorithms – that is, unless a (group) chat has been muted by the user.

The implications of the interplay between social networks, recommender algorithms and human behaviors are well illustrated by a recent study showing the interactions between the rating systems of comment sections of newspaper websites, social norms, and online behaviors (Shmargad et al., 2021). The study found that repeated negative commenting by the same person was more likely when their comments were affirmed by (1) descriptive norms (presence of other negative comments) and (2) injunctive norms (up votes or 'likes'). As rating systems often place comments with the most likes on top of the comment sections, social norms, behaviors, and algorithms interact. The infrastructures of digital media platforms thus also seem to influence norms (Diepeveen, 2022; Kryston & Fitzgerald, 2021; Shmargad et al., 2021): social media algorithms can amplify and diffuse norms, reinforce norms, and establish new norms.

To shift norms via social media, it is important to distinguish what community boundaries are – offline and online – in order to reach them. Offline, communities are groups of people that often live in the same area, go to the same school

or have similar circumstances that tie them together. Online, communities are groups – small and large – that (temporarily) gather around common interests or opinions; a process often affected by algorithmic recommender patterns steering similar people to similar places (Hasebrink & Domeyer, 2012; Helmond, 2015; Hepp, 2019; Mukerjee et al., 2018). Furthermore, research shows that offline and online social networks of adolescents overlap, meaning that a subset of the online connections are links between individuals that also know each other offline (Reich et al., 2012). Yet, individuals that know each other offline may be members of various online communities disconnected from the offline ones.

Norms-shifting on social media

Peer influence, social interaction, and widening access to more available, shared and tailored information have been identified as the main advantages of using social media for SBC (Raftree, 2019). And yet, to date, no standard definition of social norms-shifting social media interventions seems to exist. In understanding strategies to shift norms on social media, we need to look at how they are designed, implemented, what behavioral change theories explain them and how they stimulate or affect processes that shape social norms, and ultimately influence behaviors. This review therefore aims to make an inventory of the numerous approaches that development organizations have used for norms-shifting among adolescents and/or young adults on social media – either as stand-alone interventions or in the wider context of multi-layered SBC programs primarily in global public health. This review proposes a typology of strategies, identifies what is known about each approach in terms of norms-shifting, and thereby identifies knowledge gaps for the working mechanisms to be further unpacked in future research.

Methods

Search Strategy

We reviewed peer-reviewed academic literature and grey literature of qualitative, quantitative, and mixed-methods evaluations of programs and interventions that included at least one component designed to address social norms or related constructs via social media, and in which the target

population was primarily adolescents (10-19) and young adults (20-35). Initially, we searched for interventions in Low and/or Middle-Income Countries (LMICs) that focused on sexual and reproductive health, but this resulted in a low number of articles. As a result, the sexual and reproductive health focus was dropped for a broader global health lens. Included studies went beyond focusing on individual attitudes and used approaches to reach or mobilize groups and engage them in reflection or discussion on perceptions of normative beliefs, shift social norms, or build positive norms.

Our search strategy was broadly inclusive and designed to be comprehensive within the peer-reviewed literature. We conducted a structured search of four databases—CINAHL, Embase, PsycINFO, and PubMed—in March 2022. We also explored accepted abstracts to the following Conferences: International Conference on Family Planning (ICFP), Social and Behavior Change Communication (SBCC) Summit (English and French), and Sexual Violence Research Initiative (SVRI) Forum, from the last 10 years. Search terms from the following categories were chained into search queries to find the target literature: *Target Population, Social Norms, Target Behaviors, Target Geography* and *Date Range* (see Table 1).

After an initial screening of the results, a second search excluding the keyword categories *Target Behaviors* and *Target Geography* was conducted to include a larger number of records. Additional snowball searching was conducted using relevant citations in articles included in our review and other literature reviews, leading to a list of 2,772 unique publications.

To identify unpublished grey literature, two broad searches (Search query 1: ‘*social norms + social media + AYSRH*’; Search query 2: ‘*norm-shifting interventions + social media + AYSRH*’) were also conducted through Google Scholar (one time with, and one time without excluding peer-reviewed articles), and the US Agency for International Development’s (USAID’s) Development Experience Clearinghouse and Development Data Library, which is their online repository for all publicly available program materials and studies. The grey literature search identified 26 unique program evaluations, reports, process documentation, manuals, and briefs for consideration. Furthermore, we sent requests for program documentation through a stakeholder survey distributed through the Passages project contact list (with additional individuals purposefully selected based on prior knowledge of expertise in social media programming in SBC), leading to a list of

Table 1. *The Subqueries of each Keyword Category*

Keyword Category	Subquery
Target Population	("youth" OR "teen*" OR "girl" OR "young female" OR "young adult" OR "adolescen*" OR "young woman" OR "young person" OR "boy" OR "young male" OR "young man")
Social Norms	("social norm*" OR "gender norm*" OR "norm*" OR "norm change" OR "normative shift*" OR "normative intervention" OR "societal norm*")
Target Behaviors*	("sexual*" OR "sexual health" OR "sexual behavior" OR "sexual experience" OR "sexual activity" OR "early sexual debut" OR "sexual initiation" OR "pregnan*" OR "teenage pregnancy" OR "reproductive health" OR "reproductive empowerment" OR "family planning services" OR "contraception" OR "condom*" OR "family planning" OR "gender-based violence" OR "intimate partner violence" OR "sexual harassment" OR "violence" OR "sexual coercion" OR "rape" OR "sexual violence" OR "parental communication" OR "puberty" OR "sex" OR "education" OR "child marriage" OR "early marriage" OR "gender roles" OR "gender" OR "menstruation" OR "menstrual hygiene" OR "female genital cutting" OR "female genital mutilation" OR "pregnancy in adolescence"[mh] OR "gender identity" [mh] OR "coercion"[mh] OR "condoms"[mh])
Target Geography*	("developing countr*" OR "developing nation*" OR "low middle income countr*" OR "third world countr*" OR "third world nation*" OR "least developed countr*" OR "least developed nation*" OR "under-developed countr*" OR "under-developed nation*" OR "less developed countr*" OR "less developed nation*" OR "developing nation*" OR "developing nation*" OR "global south")
Date Range	2010–2022

*Excluded in the second search

Note. The subqueries from the categories were chained into search queries to find the target literature.

27 unique programs for which we retrieved available evaluations, reports, process documentation, and information on the associated websites.

Study Selection

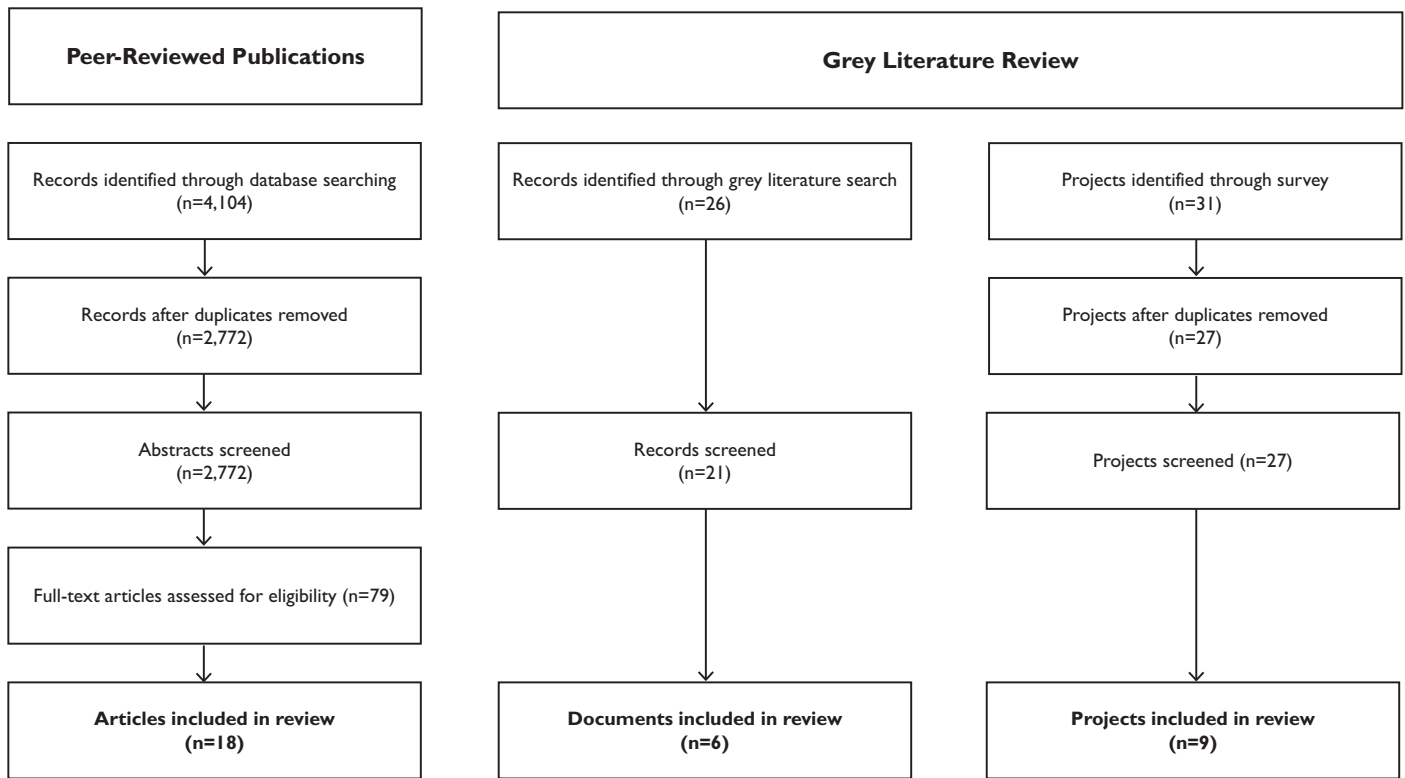
For published peer-reviewed articles obtained through the database search, the review process was managed in Covidence Online Software, and abstracts were screened by one team member, selecting a list of 79 articles for further assessment. The selected full-text articles were assessed on inclusion and exclusion criteria by at least one reviewer, with any uncertainty resolved as a group. Articles were selected if they described or evaluated an intervention that included at least one component designed to address social norms or related constructs via social media, and in which the target population was primarily adolescents (10-19) or young adults (20-35). Many of the initially selected articles did not describe and/or evaluate interventions, described and/or evaluated interventions that did not specifically aim to shift norms on social media, and/or did not specifically focus on adolescents and/or young adults in LMICs, resulting in only three articles meeting all the criteria. We therefore decided to

include interventions from countries beyond LMICs, resulting in 18 selected articles. We used the same inclusion and exclusion criteria on the grey literature, while also excluding publications or reports if dated prior to 2010. Furthermore, interventions that exclusively used group methods only to disseminate information rather than to address social norms or provided insufficient information about norms-focused components were excluded. We selected 6 documents from the grey literature search and 9 projects from the stakeholder survey that then met the final criteria (see [Figure 1](#) for a representation of the inclusion flow chart).

Synthesis of Results

Data extracted into spreadsheets included the authors' stated objectives, research methods, study population, theories and models referenced, relevant norms, and degree of attention to social norms. We also noted the program components (e.g., entry point, activities) for studies that included interventions to address social norms. When comparative trials or quantitative or qualitative program evaluations were conducted, relevant results were extracted although most of the evaluations did not address the role of social media

Figure 1. Literature search and selection chart



components specifically. Multiple documents on the same study or program were reviewed together and results were combined.

Expert Interviews

The included interventions varied greatly in their approaches, aims, and implied mechanisms of behavioral change. To make a better comparison, we aimed to gather detailed information on standout programs included in this review via expert interviews. We asked five experts who worked on four global public health (i.e., SKY Girls, Shujaaz, Merci Mon Héros, Love Matters) about their approaches, goals and strategies, implied change mechanisms, implementation, ethical issues, and their main learning points.

Expert Consultation

A draft of the report (IRH, 2022) that this review is based on was discussed in a three-hour virtual consultation with 24 international experts from SBC, communications, social norms, and adolescent-focused programs and organizations. The report was presented, and sessions focused on soliciting feedback and alignment with community-based

norms-shifting interventions. The report was later revised according to feedback provided from consultation participants, with a focus on recommendations and conclusions. Reflections from experts who participated in the consultation are shared in the discussion section, but at the request of participants, not attributed to individuals but rather are anonymous or represent joint discussion among the group.

Results

The selected programs all claimed to address norms through social media interventions, albeit to differing extents. On closer reading, it appeared that the programs applied different SBC approaches and social media strategies, informed by project-specific theories of change, and used different research methods, which made it impossible to make an objective comparison of program effects. At the same time, we noticed that the selected programs focused on specific venues on social media (i.e., public pages and profiles, comment sections, open and closed groups, chats) and followed approaches to either shift norms at individual or group/community levels. We therefore decided to make a thorough inventory of *where* these programs aimed to shift norms and

on *what level*. We have mapped the strategies that were used in the selected programs along two axes: (1) *visibility* (i.e., on which parts of social media interventions are visible), and (2) *approach* (i.e., whether the strategies are characterized by approaches to shift norms on the individual or community level). We have categorized the selected programs along these axes (see Table 2), derived common strategies, and mapped them onto the framework presented in Figure 2.

Levels of Visibility

The selected programs and interventions have leveraged various social media platforms in ways that are publicly visible (e.g., on ‘open’ social media pages and profiles) or only available to a confined group of users (e.g., on ‘closed’ social media pages and/or [group] chats). In categorizing the programs, we defined *open social media* as the parts of social media that are publicly accessible and/or where engagement

is publicly visible. This includes (1) public pages and profiles and all the content associated with these pages such as posts and live streams, (2) comment sections where users respond to articles, videos, or other types of content; and (3) open group pages that can be joined without an administrator having to accept a request for membership. Content posted on ‘open’ social media pages is aimed to reach larger audiences and may not necessarily be tailored to a targeted group. We defined *closed social media* as the parts of social media that are not publicly accessible or publicly visible such as (1) closed group pages where administrators manage who is granted access in response to requests for membership, (2) group chats where three or more people exchange instant messages or interact with a chatbot, (3) private chats where two individuals exchange instant messages, or one individual interacts with a chatbot. Content posted on ‘closed’ social media pages is often designed to be more personally relevant, with messages tailored to specific groups or individuals.

Table 2. Categorization of the selected programs

	Individual level	Mixed	Community level
Open social media	Sauti Plus ⁺ (Reach a Hand, n.d.) You have options [§] (Sundstrom et al., 2021) Safe House ⁺ (Magenta FZE, 2021) MTV Shuga: Alone together* (Baker et al., 2021)	CyberRwanda ⁺ (Y Labs, n.d.) Main Kuch Bhi Kar Sakti Hoon ⁺ (Lutkenhaus et al., 2020, 2022; Population Foundation of India, n.d.-a) YBMen [§] (Watkins et al., 2020) Flu Vaccine [§] (Bonnevie et al., 2020)	City Health II [§] (Davies et al., 2020) Safe Sex [§] (Fisser, 2013, 2016) LifeInLeggings ⁺ (Sanatan, 2017) M&M’s are like people [§] (Carrillo et al., 2018) Smoking is sooo... [§] (van den Heerik et al., 2017)
Mixed	AMAZE ⁺ (Amaze, 2022) Alcohol abuse [§] (Flaudias, De Chazeron, et al., 2015)	Shujaaz** (Hutchinson et al., 2019; Shujaaz Inc., n.d.) SKY Girls**% (Hutchinson et al., 2020; SKY Girls, n.d.) Smart Snacking [§] (Sharps et al., 2019) Girl Effect ⁺ (Girl Effect, 2020) Voices4Change ⁺ (Denny et al., 2017; Gorman & Amazon-Brown, 2017)	MyMovez [§] (van Woudenberg et al., 2020) LTE [§] (Evans et al., 2020) Love Matters**% (RNW Media, n.d.) Merci Mon Héros**% (Global Digital Health Network, 2021; Johns Hopkins Center for Communication Programs, 2020) Purpose.com ⁺
Closed social media	Mums step it up [§] (Kernot et al., 2019) Alcohol abuse [§] (Ridout & Campbell, 2014) SnehAI ⁺ (Population Foundation of India, n.d.-b; Wang et al., 2022) Big Sis ⁺ (Girl Effect, n.d.)		Breastfeeding support [§] (Robinson et al., 2019) Cyberbullying [§] (Aizenkot & Kashy-Rosenbaum, 2018)

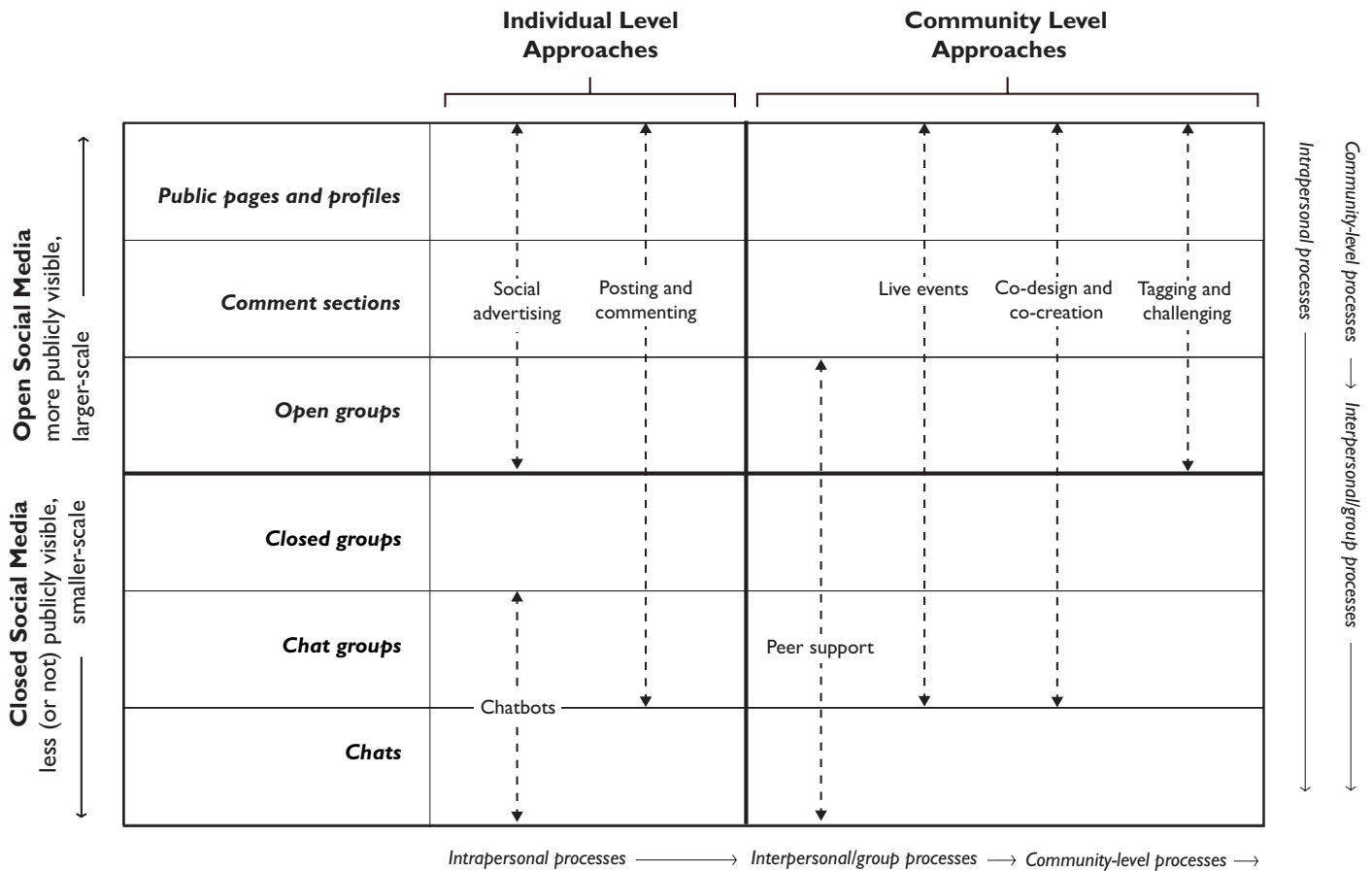
*Academic literature (LMIC)

⁺Grey literature and academic literature found through the Passages network

[§]Academic literature (non-LMIC)

[%]Interviewed

Figure 2. Categorization of Strategies used Across Visibility and Approaches for Norms-shifting on Social Media



Norms-shifting across multiple levels of visibility

Figure 2 provides an overview of how features of social media have been leveraged to shift norms or contribute to norm shifting across the various levels of visibility on social media. All levels of social media (e.g., open, closed, and mixed) have been leveraged to shift knowledge and attitudes in various spaces: chatbots and social media posts aimed to shift norms on the intrapersonal level; social media posts on public pages and in open groups, and comments in comment sections aimed to shift norms at the community level; and social media posts in closed groups and messages in group chats aimed to shift norms on the interpersonal/group level.

In the selected programs, strategies used on open social media included public profiles or pages that were either dedicated to a program’s activities or were the timelines of individual social media users or peer influencers spreading program-related messages. Social media posts or messages may exert normative influence on a user (Chin et al., 2021; Iskarpatyoti et al., 2018; Lewis et al., 2018; Purba et al., 2021; Wombacher et al., 2017), but may also receive

long threads of comments that potentially exert normative influence too (Shmargad et al., 2021). For example, exposure to posts showing peers drinking heavily can affect the extent to which one thinks binge drinking occurs, is socially acceptable, and is a way to have a good time with friends. Comments can further reinforce this. These comments, however, are only visible to individuals that have been exposed to the associated social media post via their timelines and only if they choose to scroll through the comments.

The common strategies that were identified are described here from most publicly visible to least:

Public pages, comment sections, and open groups. The most open parts of social media (i.e., public pages and open groups) were leveraged to address community-level processes. Community-level processes on social media are interactions between individuals that social media users do not necessarily know personally but are visible to social media users belonging to online communities that have formed around, for example, a hashtag, specific YouTube accounts, or Facebook pages. At the community level, the identified

strategies aimed to stimulate the circulation and/or creation of media content to shift descriptive norms (e.g., stimulating pledges that endorse condom use) and stimulate processes that reward the desired kind of behavior to shift injunctive norms (e.g., stimulating reinforcement of pledges via comments). Addressing norms at the community level on social media is thought to make norms at that level more visible.

Closed groups and group chats. Closed groups and group chats were leveraged to address interpersonal/group-level processes. Interpersonal/group-level processes on social media are interactions between peers within a contained group such as a Facebook group or a Telegram channel. Compared to public pages and comment sections, the more private character of closed groups and group chats (social media users have to actively join a group or group chat before being able to access the groups or chat content) allows program developers to focus on this group more specifically and create a safe space. Closed groups and group chats were mostly leveraged to address interpersonal and/or group processes by addressing sensitive topics to shift descriptive norms (e.g., asking group members if they carry condoms to stimulate affirmative comments) and by fostering peer support to shift injunctive norms (e.g., stimulating the exchange of experiences with condom use and stimulate positive reinforcement).

(Group) chats. In the selected programs, (group) chats have been leveraged to introduce information and address issues in highly personalized ways (e.g., providing personalized advice using chatbots or via one-on-one chats with frontline workers), aiming to shift individually held knowledge and/or beliefs. Such activities were undertaken with a view to further disseminate and reinforce norms at levels that are less publicly visible.

Individual Level vs. Community Level Approaches

In addition to categorizing common social media strategies along their levels of online visibility, we distinguished two approaches that were leveraged to reach and/or engage their respective target groups on social media: individual level and community level approaches. [Figure 2](#) distinguishes between social media strategies drawing from individual level and community level approaches.

Individual level approaches. Individual level approaches to norms-shifting on social media draw from strategies that

deliver media content or messages attuned to specific target groups to shift norms across varying levels of visibility of social media. The social media strategies that draw from individual level approaches across the selected programs sought to influence intrapersonal factors such as individually held knowledge and attitudes. For example, these interventions aimed to amplify public support for or use of contraceptives by posting and commenting on open and closed social media or via (group) chats. This also included applications of the social advertising strategy to deliver these messages to larger groups and/or more specific groups on open social media, often used for those messages to be further disseminated through reinforcement or other processes offered by social media platforms (e.g., likes, shares, comments).

Community level approaches. Community level approaches to norms-shifting on social media draw from strategies that leverage social capital in online communities to influence interpersonal, intrapersonal/group, and community-level processes, often in collaboration with key stakeholders and influencers in the target group. Strategies such as co-design and co-creation and tagging and challenging on open and closed social media involve and empower target groups to create, share, and amplify (social media) content and stimulate online engagement in its wake. The co-design and co-creation strategy inspires audiences to share, post, and comment on open and closed social media; and the tagging and challenging strategy inspires target groups to tag and/or challenge their peers on open and closed social media via their own profile pages, in social media groups, and via chat groups and instant messaging apps (i.e., WhatsApp, Facebook Messenger). The live events and peer support strategies stimulate reflection and discussion on social norms (mainly shifting descriptive norms) and foster dialogue, reinforcement, and peer support (mainly shifting injunctive norms).

Offline and online social communities overlap (Reich et al., 2012), so most of the selected programs that followed a community level approach start at the local level: often a school class or group of citizens from a certain area and layer norms-shifting activities on social media from there. Larger programs that aimed to build or engage with communities on a national or global level often supplemented community level strategies with offline activities such as community mobilization events or with individual level strategies such as social advertising to reach audiences to build and engage with a community.

Both individual level and community level approaches drew from social media strategies to shift norms in specific ways, outlined in the following sections. It is important to note, however, that interventions to shift norms hardly ever rely on a single strategy and/or approach; most of the programs selected for this review combined the strategies and approaches outlined below, as is demonstrated in the case studies [i.e., AI-powered chatbot Big Sis (Girl Effect, n.d.); media platform Shujaaz (Hutchinson et al., 2019), the SKY Girls movement (Hutchinson et al., 2020); the testimonial video program *Merci mon Héros* (Global Digital Health Network, 2021; Johns Hopkins Center for Communication Programs, 2020)].

Individual level norms-shifting strategies

Individual level norms-shifting strategies on social media (both open and closed) revolve around delivering media content or messages that are attuned to normative perceptions of individual audiences and/or audience groups to shift norms. Such messages can be designed manually, drawing from formative research; or automatically, drawing from data provided by the user via questionnaires, messaging, or user interfaces, which is also referred to as computer-aided message tailoring (Kroeze et al., 2006; Lustria et al., 2009; Peels et al., 2013).

Posting. Posting media content on social media to address norms is the most common strategy across the programs selected for this review. Following an individual level approach, posting occurs on public social media pages – either dedicated to the intervention or on pages owned by social media influencers that program developers collaborate with (e.g., Bonnevie et al., 2020), in comment sections, in open and closed groups (e.g., Watkins et al., 2020) and via apps or instant messaging (e.g., Flaudias et al., 2015; Kernot et al., 2019). The modality and content of social media posts vary from fact sheets and quotes to short video stories. Often, social media posts aim to address norms directly and/or by stimulating engagement with specific social norms to generate social proof (Baker et al., 2021; Lutkenhaus, 2020; Lutkenhaus et al., 2022; Magenta FZE, 2021). Social proof is a psychological and social phenomenon wherein people copy the actions of others in a given situation (Cialdini & Trost, 1998). On social media, social proof materializes in comments or other kinds of engagements with media content that reinforce the message that it is responding to.

An example of the posting strategy that draws from an individual level approach is *MTV Shuga: Alone Together* (2020), a YouTube miniseries by the MTV Staying Alive Foundation. With 70+ short episodes released daily on YouTube starting in April 2020, the miniseries aimed to increase young people’s knowledge, motivation, and actions to prevent COVID-19 and shape norms around public health. The episodes follow a group of young people through video chats that show how they cope with the pandemic through discussion on topics such as vaccine safety and disinformation. Originally aimed at African countries (i.e., Botswana, Nigeria, South Africa, Kenya, and Côte d’Ivoire) the series reached an audience of 7.7 million across the five countries, with over 1 million unique views of the series’ episodes and averaging 5,638 unique views per episode. Analysis of 3,982 comments and 70 live chat conversations showed how the posting strategy stimulated followers to reinforce the episodes’ key messages and complement them with their own views, experiences, and stories. The viewers – predominantly adults under 35 and mostly women – felt compelled to follow the COVID-19 safety measures and used social media to reach out to fellow viewers for advice, solace, support, and resources. The miniseries stimulated people to support and influence each other to shape norms around public health (Baker et al., 2021).

Social Advertising. Social advertising complements other strategies to expand the reach of messages (e.g., Sundstrom et al., 2021; Gorman & Amazon-Brown, 2017). Social advertising is the option offered by most social media platforms to ‘boost’ or ‘sponsor’ posts, targeting specific demographics (e.g., age, location, gender) and/or interests (e.g., dance, electronic music, cooking). Social advertising can be used to reach individuals beyond the circle of followers of the page where the media content is posted (for example: reaching 12–18-year-old girls in a specific region who do not follow the local health services on social media). Social advertising can be configured in ways to reach target audiences that meet specific demographic categorizations or interest patterns.

In norms-shifting interventions, social advertising often plays a supportive role in reaching target groups on open social media. Social advertising is used to convey posts to a larger group and is often further disseminated through other processes offered by social media posts (e.g., through algorithms). It is not normally used as a strategy to directly influence norms, although the delivery of messages to specific groups can indirectly shift norms.

An example of social advertising used to contribute to norms-shifting is provided by *Love Matters* – a sexual and reproductive health and rights program by RNW Media (RNW Media, n.d.). The program focuses on youth aged 18-30 across various countries (i.e., India, Kenya, Egypt, Nigeria, China, Mexico, Burundi, Congo) and builds online communities to facilitate conversations to shift norms around sexual health and sexual pleasure via reflective dialogue. *Love Matters* posts messages on its open social media pages that aim to stimulate reflective dialogue. For example, a post asks the question: ‘Is it possible for someone to be not interested in sex overall?’ During an expert interview, RNW disclosed that *Love Matters* uses social advertising kickstart conversations in the comments and attract the rights audiences. As initial comments can influence the course of the comments that follow, they use social advertising to involve specific target groups that can strike the right chord with their audiences.

Chatbots. Message tailoring is widely used to increase the relevance of communication programs by adapting messages to the audiences’ knowledge, beliefs, and attitudes around specific issues. Message tailoring was employed for several decades before social media through mass media and other communications modalities. In norms-shifting interventions, it has been employed to provide personalized normative feedback, aiming to shift descriptive norms (Neighbors et al., 2015). On social media, chatbots use messaging apps (e.g., Facebook Messenger, Whatsapp) as a delivery mechanism and, compared to tailoring, offer a higher degree of interactivity for a conversational experience (e.g., Girl Effect, 2020; Wang et al., 2022). Via chatbots, messages can be attuned to social media profiles and/or offer a tailored conversational experience as users decide the course of the conversation by, for example, asking questions or picking themes to discuss at their discretion and timing. The selected interventions show that, by providing direct feedback, chatbots can be used to influence injunctive norms (e.g., using interactive quizzes to reinforce healthy sexual behaviors), stimulate information-seeking behaviors, provide support, and reshape the gender attitudes of social media users. Furthermore, chatbots offer anonymity and a safe space to talk about topics or ask questions that would otherwise be considered taboo (in most cases, users know they are interacting with non-human actors).

An example of the chatbot strategy is ‘Big Sis’; an AI-powered chatbot where girls can get trusted,

non-judgmental advice about sex and relationships in 8 languages. ‘Big Sis’ is part of the Springster platform, a global mobile brand by Girl Effect that is available to girls in 8 languages and in 15 countries in Africa and Asia (e.g., South Africa, Ghana, Indonesia, Nigeria, Bangladesh, Kenya). The chatbot provides a trusted environment where girls get questions answered about sexual and reproductive health that they often cannot ask anyone else and is available via WhatsApp and Facebook Messenger. Evaluations have shown that girls who chat with Big Sis know more about sexually transmitted infections and contraception and are primed to act upon it (Girl Effect, n.d.).

Community level norms-shifting strategies

Community level norms-shifting strategies on social media (both open and closed) leverage social connectedness in online and/or offline communities to shift norms and reach target audiences. Community level norms-shifting strategies are designed to involve and empower target groups to create (social media) content and to stimulate engagement, either through offline training and workshops or through online collaborative platforms or social media groups

Tagging and challenging. A few of the selected interventions employed the tagging and challenging strategy to involve and activate online communities and to stimulate processes that result in new media content (influencing descriptive norms) and reinforcement of content (influencing injunctive norms). Furthermore, by tagging and challenging, participants invited members of their social networks to participate as well. In the selected interventions, many content formats have been applied, for example: sharing quizzes and puzzles (e.g., multiple choice questions, word finders), sharing stories or statements and asking questions (e.g., asking audiences for their opinion), tagging others (e.g., asking to acknowledge important others – loved ones, role models, etc. – by tagging them), making pledges by adopting frames and/or filters (e.g., adopting a Facebook frame in support of gender equality), and creative challenges (e.g., poetry challenges, finishing song lyrics, participating in dance challenges) (Global Digital Health Network, 2021; Hutchinson et al., 2020; Lutkenhaus, 2020; Lutkenhaus et al., 2022) None of the media formats in the tagging and challenging category appear to provide a recipe for success, however: a small number of posts resulted in many meaningful responses. For example, simple, open-ended questions

or challenges (e.g., finishing a poem, adopting a Facebook frame), tapping into current affairs, and referring to popular culture appear to be most successful in terms of stimulating meaningful engagement (Lutkenhaus et al., 2022).

An example of the tagging and challenging strategy is provided by SKY Girls: a multimedia and empowerment program aimed at girls in Botswana, Ghana, Kenya and Côte D'Ivoire designed and implemented by Good Business (GB) and Now Available Africa (NAA). SKY Girls uses the tagline "Be true to yourself" to build an aspirational environment in which adolescents feel a sense of social identity and social inclusion. This encourages girls to act in ways that are beneficial to their health and well-being. During school visits, SKY Girls facilitators introduce girls to the principles of the "SKY sistahood," and encourage girls to take a SKY pledge to remain true to themselves (Hutchinson et al., 2020; SKY Girls, n.d.). Online, the cast of the SKY Girls movies make the pledges too and call for followers of the page to do the same. New pledges may influence descriptive norms, and challenging other girls to take the pledge too potentially disseminates social proof via their social connections.

Co-Design and Co-Creation. The co-design and co-creation strategy aims to empower offline and/or online communities to co-design social media campaigns and/or co-create social media content to shift social norms. This often materializes in a corpus of pledges and/or personal stories gathered under a single (co-created) hashtag or slogan (descriptive norms) but may also result in activities to foster supportive online communities (injunctive norms). As offline and online communities overlap, the point of departure for most interventions selected for this review are offline communities reached through schools, organizations or public events that are invited for training and workshops to produce the anticipated media content (e.g., Hutchinson et al., 2020; Johns Hopkins Center for Communication Programs, 2020). Participants can be asked to co-design social media campaigns (e.g., Fisser, 2013) and/or co-create social media varying from single videos, photos or texts (e.g., Carrillo et al., 2018; Evans et al., 2020; Global Digital Health Network, 2021; Hutchinson et al., 2020; Johns Hopkins Center for Communication Programs, 2020; van den Heerik et al., 2017); to fully-fledged video clips to miniseries (e.g., Davies et al., 2020). Often, the media content is posted on the social media feed of the individual participant and/or shared via the social media page of the associated program. In some cases, participants are asked to share social media

content on social media groups (open and closed), group chats, or individual chats.

An example of how pledges, co-created with members of the target audience, are used to shift norms on social media is provided by *Merci Mon Héros* (meaning 'thank you, my hero') - a program in francophone Africa that spurred from a youth design challenge and that has been further developed under the guidance of Johns Hopkins Center for Communication Programs' Breakthrough Action and Breakthrough Research projects. At the heart of the program is the idea of leveraging testimonial videos on social media, showcasing positive examples, and modeling positive behaviors to reduce the impact of norms that prevent youth from accessing family planning and reproductive health information and services. During an expert interview, the program team shared that they use a co-design and co-creation strategy to reach and involve young people, but also adults such as parents, teachers, religious leaders, and other gatekeepers. In testimonial videos, both groups share stories taken from real-life (e.g., a young woman talking about her unplanned pregnancy), often thanking an adult that was there for them. In doing so, the program sheds a positive light on people that played a role in breaking barriers and taboos around sexual and reproductive health and who model positive behaviors (Johns Hopkins Center for Communication Programs, 2020). The stories in *Merci Mon Héros* are often drawn from (offline) community events, where the program creators found young people to share their stories, editing them into a sharable format. In addition to the testimonial videos on social media, the program used other strategies such as live events, posting and commenting, and – although limited – also used mass media (radio and TV).

Peer Support. On closed sections of social media, a few of the programs included in this review have contacted existing social media groups or chat groups – or have set up new groups to foster a supportive community that provides peer support and shifts norms by sharing personal stories (e.g., Aizenkot & Kashy-Rosenbaum, 2018; Robinson et al., 2019). Such groups require moderation, but as engagement stays within a closed community of like-minded individuals, it is often much more personal and/or personally relevant than engagement within communities on open social media.

An example of how the peer support strategy can be used is provided by Love Matters (RNW Media, n.d.), a program described earlier to illustrate the social advertising strategy. Love Matters revolves around a pleasure-positive

approach: providing information and stimulating conversations supported by culturally sensitive media content and moderation by trained, local moderators to keep conversations on-topic. During an expert interview, RNW disclosed that the Love Matters communities have been built from the bottom up and are complemented by strategic alliances with social media influencers and health and advocacy organizations to expand further. Media content attuned to the local contexts stimulates conversations across digital touchpoints.

Live events. Live events are the online equivalent of offline community events and often complement a wider range of activities in community level intervention approaches. Live events can take place on YouTube, Facebook, and Instagram and often aim to shift norms by facilitating a reflective dialogue by influential social media users or stakeholders in the wider program. Furthermore, on open social media, live events are highly prolific happenings that boost the online presence of programs, making other components of programs visible to others. On closed social media, live events often address personal stories and taboos and are more focused on strengthening the community from within (e.g., *Girl Effect*, n.d., 2020).

Discussion

To date, SBC programs have approached norms-shifting on social media in various ways. This review suggests that there is no single ‘winning formula’: the activity of norms-shifting is context-dependent and needs to be carefully attuned to the target issue and audience while also considering the broader environment for shifting norms online and offline. This review provides an overview of the most common strategies to leverage social media for norms-shifting. We provide a framework for distinguishing between strategies approaches that focus on the individual level versus the community level and at various levels of visibility on social media (open, closed and mixed). We have reviewed how these strategies are thought to influence descriptive and injunctive norms and at what levels (i.e., community, interpersonal/group, and intrapersonal). This article provides a typology, identifies an evidence gap in terms of the implied change mechanisms and effectiveness of the various strategies, and represents a first step toward building evidence.

An important limitation of this paper is that there was too much variety and too little data to objectively compare the

outcomes of the identified programs. This variety is largely explained by the selected programs aiming to influence factors beyond social norms, which is reflected in the large variety of the (tailor-made) theories of change at the heart of these programs. Furthermore, the outcomes of the interviews and consultation suggested that SBC programs are constantly navigating complex environments and seem to benefit from a certain extent of reflexivity. The typology proposed in this article provides a comprehensive overview of the strategies that have been applied to shift norms on social media with adolescents and youth to date and thereby represents a first step in building evidence. The typology can be used to guide future comparative research on the effectiveness of different kinds of strategies and approaches that we have identified. Furthermore, SBC professionals can use the typology to improve their approaches and strategies, either for stand-alone interventions or as a part of larger SBC programs. Below we share a number of discussion points, with additional limitations for consideration.

Fluidity and Scalability

In the programs and interventions selected for this review, we distinguished two categories of norms-shifting strategies on social media: (1) individual level approaches that aim to deliver communications attuned to target audiences to affect norms and use social media strategies such as posting and commenting, social advertising, and chatbots to reach target audiences; and (2) community level approaches that aim to leverage social connectedness in (online) communities to reach audiences and shift norms, using strategies such as co-designing and co-creating social media content, tagging and challenging, live events and fostering peer support groups. The strategies in both categories leverage features of social media that vary in public visibility. On closed social media, features such as group pages, group chats, and instant messaging provide messages about social norms that are highly personally relevant and/or often on issues that are considered too taboo or controversial to discuss openly. On open social media, media content and comments often address norms at the interpersonal and community level by making pledges, building social proof, and breaking taboos.

Although the proposed typology distinguishes two main approaches, the ways in which the corresponding strategies are implemented vary across the programs included in this review. For example, the selected programs include small,

local interventions based on local real-life groups (e.g., ‘Youth as Partner’, Carrillo et al., 2018; ‘Smoking is sóóó.’, van den Heerik et al., 2017; ‘MyMovez’, Van Woudenberg et al., 2020); and large-scale programs that primarily aim to build global communities around key themes using world-wide social media platforms (e.g., ‘Love Matters’, RNW Media, n.d.). Most of the norms-shifting programs reviewed in this paper, however, employed a mix of various strategies to target the intrapersonal, interpersonal/group, and community levels at the same time. Furthermore, these programs rarely focus on social media alone and acknowledge social media as one of the multiple environments where target audiences can be influenced and where norms can be shifted. Individual level and community level approaches are therefore not mutually exclusive; in fact, they are fluid and can be configured to reinforce each other. For example, besides the testimonial videos on social media, *Merci Mon Héros* included other components such as community events (off- as well as online), informative and engaging posts on social media pages, and - although limited - mass media (radio and tv).

Multi-level programs (include components that) aim to shift norms among specific communities. To shift norms via social media, it is important to distinguish what community boundaries are – offline and online – and to consider that they most likely overlap. This implies that to successfully shift norms using social media within the context of larger SBC programs, it is important to understand the role that social media play in the larger environment of community members. Following a socio-ecological approach, programs need to be mapped along social media patterns in a way that is similar to other (offline) environments. Program developers need a good understanding of the role that social media plays in the daily lives of target audiences, who influences their behaviors, which social media behaviors they have in common, and the issues that programs aim to address.

Stimulating Engagement

To address norms on social media, a key factor seems to be that individuals are more likely to change their descriptive norms if they see the actual behavior occurring or being reinforced on the feeds of multiple peers in a closed social network (Shane-Simpson et al., 2017). Stimulating engagement on personal timelines and in comments sections – either

following an individual level or a community level approach and using various strategies – is an effective way to influence descriptive norms. Depth of engagement varies across the various strategies mapped out in [Figure 2](#). For example, in individual level approaches, engagement often takes the shape of chatting with a moderator or chatbot, whereas community-based interventions often use trained moderators and work with influencers that are part of the audience segments that the program aims to reach and are therefore culturally fluent. Various interventions selected for this article trained their moderators to engage participants, manage the dynamics and ensure safety.

A drawback of stimulating engagement is that program developers have limited control over the kind of engagement that is stimulated and the course the engagement takes. During the consultation event, various practitioners and researchers reported cases where audiences did not respond positively to messages crafted about specific social norms. Also, cases were mentioned where a few social media users responded intensely and aggressively, attracting more of such comments while potentially scaring away social media users who would agree with the original message. To prevent this from happening, it appears important that the portrayed norm is not too far from what the actual norm is among specific audience segments, which emphasizes the importance of formative research. For example, after identifying a gap between what young girls thought the norm was (carrying condoms is ‘slutty’) and what the norm actually was (carrying condoms is smart), the AIDS/STD Foundation in the Netherlands successfully stimulated engagement using influencer videos and YouTube comments to shift normative perceptions. In short videos, beauty influencers asked their followers to respond to what they heard most girls think the norm was (‘slutty’), yielding thousands of comments largely rejecting the norm and pointing out that it is actually smart (Fisser, 2016).

Furthermore, it is essential that messages about social norms reach the right audience segments. On social media, where algorithms tailor the contents of timelines, it can be complex. Algorithms seem to amplify engagement with social norms messaging by adding it to the timelines of the peers. This is true for positive reinforcement but also for negative engagement, and as groups of closely connected social media users are often characterized by like-mindedness, this potentially attracts groups that are likely to have a similarly positive or negative stance toward that norm. For the most

part, the initial responses that messages about social norms receive on social media seem to influence the course of subsequent engagement. Various programs have therefore used social advertising to reach the right target audience, kick-starting engagement in the desired way and attracting similar engagement organically (e.g., RNW Media, n.d.).

Gatekeepers and Power Holders

Just like in offline communities, online communities include influencers such as social media personalities, artists, athletes, or religious leaders. Research suggests that program developers can collaborate with social media influencers to effectively reach and engage with specific audience segments (Lutkenhaus et al., 2019). Some of the programs reviewed collaborated with influencers in online communities (e.g., Bonnevie et al., 2020; Fisser, 2016; Population Foundation of India, n.d.-a; RNW Media, n.d.), while others – mostly small-scale programs – identified the most influential members of offline communities and trained them to share norms-shifting social media content (e.g., Carrillo et al., 2018; Evans et al., 2020; Global Digital Health Network, 2021; Johns Hopkins Center for Communication Programs, 2020; van den Heerik et al., 2017; van Woudenberg et al., 2020). Engaging influencers in the (social media) environment helps to build social proof and/or reinforcement, which may hold parallel to engaging such groups offline in norms-shifting efforts.

Using Social Media Data for Formative, Adaptive and Evaluation Research

Various digital tools and methods can be applied to conduct formative research, adaptive research, and evaluation research to better understand interests, opinions, questions, and reigning norms among online communities before, during, and after the implementation of norms-shifting interventions on social media (Iskarpatyoti et al., 2018; Kaltura, 2020; Lutkenhaus, 2020; Lutkenhaus et al., 2019; Raftree, 2019; Sánchez-Páramo & Legovini, 2021; World Bank, 2019). The availability of social media data offers the opportunity to leverage social listening to assess norms and monitor norm shifting on social media. Notably, during the interviews and expert consultation *Merci Mon Héros* disclosed to use social listening and online monitoring techniques for formative research (i.e., determining what are the

most pressing questions), adaptive management (i.e., what new questions and issues surface, what positive examples may be amplified?), and evaluation (i.e., what was the impact of the campaign?), while noting that it is highly important to triangulate such findings with others kinds of data to reach a full understanding (Global Digital Health Network, 2021). This is also shown in a few of the programs selected for this review (Global Digital Health Network, 2021; Lutkenhaus et al., 2022).

Ethical Issues

Ethical issues arise from privacy and ownership of user-generated media content, access to social media technologies, and unintended consequences of amplification, i.e., when a testimonial video goes viral and results in negative backlash for the user featured in the content. Especially in LMICs, access to social media technology is not a given for all audiences, particularly younger ones. For example, the SKY Girls program in Ghana focused on anti-smoking behaviors among girls 13–16 years old – a group that has limited access to social media. During an expert interview, the program creators shared that SKY Girls Ghana mainly used school and community-based events, movies, radio shows, magazines, and promotional activities to stimulate normative and behavioral change, with social media playing a supportive role (Hutchinson, 2020).

During the consultation, experts also highlighted (media) literacy and age-related sensitivities: children and low literate people may post without realizing the myriad ways in which their information could be used, even though it is in the platforms' terms and conditions. Emerging legislation in data privacy, security, and limits to digital profiling aims to protect such audiences but may affect individual level approaches in that there are likely to be limits to the extent of personalization of media content and targeted advertising – especially for minors (Council of the European Union, 2022; Raftree, 2019).

Conclusion

In most cases, norms-shifting strategies on social media are implemented within larger and multi-layered SBC programs and interventions. Most of the programs selected for this review include elements of individual level and community

level approaches and leverage various social media strategies working in accordance with other offline program activities to not only shift norms but also improve knowledge, attitudes, and improve access to services. Aligning norms-shifting activities on social media with factors at the individual, family, community, and society levels, while also using digital research methods to better understand how to account for the influence of algorithms and other mechanisms of social media platforms in program design, makes norms-shifting on social media a complex, yet promising addition to the SBC media mix (Kaltura, 2020; Petit & Zalk,

2019; Raftree, 2019; Sánchez-Páramo & Legovini, 2021; Gorman & Amazon-Brown, 2017).

Programs have approached norms-shifting on social media in various ways and this article has made an inventory of commonly used strategies. These strategies are often used, researched, and evaluated in isolation, making the evidence for their working mechanisms and effectiveness thin. By mapping the strategies onto our framework, social media strategies can be more systematically linked to the multi-level context in which they are applied, allowing future research to build towards a corpus of evidence.

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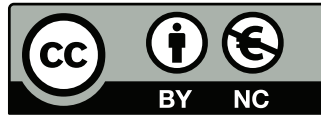
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