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Abstract

This paper experimentally tests the effectiveness of two short edutainment campaigns (under 25 minutes) delivered through Facebook Messenger at reshaping gender norms and reducing social acceptability of violence against women in India. Participants were randomly assigned to watch video clips with implicit or explicit messaging formats (respectively a humorous fake reality television drama or a docuseries with clear calls to action). After one week, the intent-to-treat effects of the implicit format on knowledge, gender norms, and acceptability of violence against women oscillated between 0.16 and 0.21 standard deviations yet impacts diminished after four months. By contrast, the explicit format was more impactful in the short term in increasing willingness to share video clips with friends and promoting online information-seeking behaviors. In the medium term, individuals who were exposed to the docuseries were 91 percent (7.5 percentage points) more likely to add a frame against violence against women in their Facebook profile picture, a public display of their disapproval of this harmful practice. The general lack of heterogeneous effects across social status indicators suggests social media as a potential medium for reaching different online populations, including vulnerable ones.

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Using Social Media to Change Gender Norms: An Experiment within Facebook Messenger in India*

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1 Introduction

Violence against women (VAW) is a global epidemic, with 35 percent of women worldwide having experienced physical or sexual violence in their lives (WHO, 2013). Its adverse effects range from physical and mental health issues for women and their children to broader social and economic losses (Raghavendra et al., 2019).[1] Permissive attitudes towards VAW are widely accepted, with four in ten women (and three in ten men) justifying VAW in about 50 low and middle-income countries (Sardinha and Catalán, 2018). Such widespread acceptance of domestic violence is a risk factor for its incidence (Abramsky et al. 2011; Flood and Pease 2009).

Most VAW prevention programs are delivered through resource-intensive grassroot mobilization campaigns (Green et al., 2020). Evidence on these interventions is mixed (Abramsky et al. 2014, 2016; Bourey et al. 2015; Dhar et al. 2022; Jewkes et al. 2020; Kerr-Wilson et al. 2020; Wagman et al. 2015) and their scaled implementation may be prohibitively costly in low-resource settings. Social and behavior change communication campaigns (SBCC) may provide a cheaper alternative. Theoretically, their messaging can reshape individuals' attitudes and behaviors directly (individual channel), or indirectly through a social channel, by reaching other community members and eventually updating individuals' perceptions of prevalent social norms (Akerlof and Kranton 2000; Mackie 1996).

Entertainment-education – also known as edutainment – is the use of entertainment media to increase audiences' knowledge about an educational issue, create favorable attitudes, shift social norms, and change overt behavior (Brown and Singhal 1999; Singhal and Rogers 2012). Recent field experiments demonstrate that even low doses of edutainment programming (stand-alone programs that last between 20 minutes and 3 hours) can effectively reshape gender norms and reduce the social acceptability and incidence of VAW (Arias 2019; Banerjee et al. 2019*a*; Green et al. 2020). This research tested the delivery of edutainment in community settings (e.g., public screenings), with two studies experimentally showing that the social channel greatly drove these impacts, and that private viewings of edutainment media had limited effects on VAW outcomes (Arias 2019; Green et al. 2020). A natural question, then, is whether these findings can be generalized to social media campaigns, where the influence of individual and social channels is less clear.

In this paper, we experimentally test the effectiveness of edutainment at reshaping gender norms and reducing social acceptability of VAW when delivered individually through Facebook

[1] For instance, Duvvury et al. (2013) find that VAW's annual economic costs can reach up to 1-2 percent of GDP due to healthcare costs, productivity loss, and losses in future human capital formation.

Messenger. The tested campaigns consisted of short video clips that in total amounted to approximately 25 minutes, in line with communication research suggesting that short video clips are needed for effective social media marketing campaigns (Constantinides, 2014). We recruited individuals ages 18-to-24 years living in New Delhi and six other northern Indian cities using a Facebook ad campaign. We collected self-reported and objective online outcomes and measured impacts one week and four months after program exposure. To understand whether implicit messaging was more effective than explicit messaging, the treatment group was randomly exposed to either a humorous fake reality TV drama on gender norms and misconceptions (implicit) or a docuseries about VAW and gender discrimination with clear calls to action (explicit).

Our findings show that both edutainment formats worked, with effects varying for different outcomes. Our objective viewership data shows that take-up rates for the humorous drama were twice as high compared to the more information-focused docuseries. On effectiveness, however, neither format dominated in the one-week follow up survey. While the drama was more effective at raising knowledge and reshaping attitudes related to gender norms and VAW (intent-to-treat effects oscillated between 0.16 and 0.21 standard deviations), the docuseries was more impactful in increasing willingness to share video clips with friends (5 p.p.) and promoting online information-seeking behaviors (10 p.p.).

In the four-month survey, individuals assigned to the docuseries were 91% (7.5 p.p.) more likely to add the frame "End Violence Against Women" to their Facebook profile picture. This effect along with users' greater willingness to share campaign videos with online friends are important outcomes for social media campaigns designed to update perceptions of social norms within online communities. Moreover, we document spillover effects in the long-term. We found that about one and a half years after the frame was first presented to the respondents, it was used by more than 34,000 people all over the world, an amplification of about 55 times the initial audience size. Our findings are strengthened by evidence of baseline balance across experimental arms, no evidence of attrition bias or placebo effects, and are robust to the addition of controls across practically all outcomes of interest.

In our post-hoc heterogeneous analysis,[2] consistent with theories suggesting that people's beliefs and behaviors are influenced by their perception of prevalent social norms (e.g., Bicchieri 2005, 2016; Miller and McFarland 1987), we observe smaller effects for individuals that perceived their Facebook friends to have more conservative gender views at baseline.

[2]The study analysis was not pre-registered, including the variables used in our heterogeneous analysis. Thus, we refer to the latter as post-hoc.

Moreover, with the exception of females, who were generally less affected than males,[3] we find no evidence that the intervention had differential effects across a series of social and demographic indicators, including age, caste, membership in a social organization, and educational achievement of respondents and their parents. The general lack of heterogeneous effects for different social status indicators suggests that social media may be an effective medium for delivering social norms campaigns to vulnerable populations, who may find it harder to participate and have a voice in community events.

Our study contributes to various streams of literatures. Recent work emphasizes the use of marketing techniques to achieve sustainable behaviors (Chandy et al. 2021; Constantinides 2014), particularly changing social norms (Burchell et al. 2013; McKenzie-Mohr 2000). Our findings provide new evidence that social norms campaigns that use edutainment formats can trigger immediate shifts in individuals' attitudes towards gender norms and VAW. The study also highlights the potential of expanding off-the-shelf social media tools to achieve and assess development impacts through social marketing. Evaluating the effectiveness of social media campaigns with development objectives is often complicated, with recent studies (Shawky et al., 2019) almost exclusively relying on short-term engagement measures (e.g., likes, sharing, website activity). In this study, we use a newly developed survey chatbot called Virtual Lab (Rao et al., 2020) that can be integrated into social media platforms to deliver and measure the impact of online campaigns on outcomes beyond standard engagement measures.

The study also contributes to the literature on reshaping attitudes towards gender norms and VAW. The importance of social norms in perpetuating gender gaps has received recent attention by scholars (Alesina et al. 2013; Bertrand 2020; Bertrand et al. 2015). Studies emphasize the impact of gender stereotypes on educational outcomes (Alan et al. 2018; Carlana 2019; Lavy and Sand 2015; Terrier 2015) and belief distortions (Bordalo et al., 2019), as well as the importance of correcting gender misperceptions for female labor participation (Bursztyn et al., 2020). We add to this literature by showing that edutainment interventions that question existing social norms can tackle permissive attitudes towards VAW.

Relatedly, and in contrast to Jewkes et al. (2020) and Kerr-Wilson et al. (2020), our study adds to Arias (2019), Banerjee et al. (2019*a*) and Green et al. (2020), and shows that high-quality, stand-alone edutainment can be a low-cost approach for reshaping attitudes and preventing VAW in developing countries. Our study also sheds light on the mechanisms through which edutainment works when applied to a new medium. While our design cannot

[3]Attitudinal impacts across genders are mixed in previous VAW edutainment studies, with the Nigeria (Banerjee et al., 2019*a*) and Uganda trials (Green et al., 2020) generally finding stronger impacts for men and women, respectively.

precisely disentangle the role that the social channel played in mediating program impacts (as in Arias 2019 and Green et al. 2020), because study participants did not know if their friends were part of the study or not, our experiment suggests the social channel is not a necessary condition for changing individuals' attitudes and behaviors through online campaigns. Moreover, considering the impacts on online sharing and posting, our results lend support to the possibility of achieving a self-sustained virtuous circle of social change.

Lastly, empirical work within the social media literature has thus far focused on health, crime, political and wellbeing outcomes (Alatas et al. 2019; Allcott et al. 2020; Allcott and Gentzkow 2017; Banerjee et al. 2020; Bond et al. 2012; Donati 2019; Enikolopov et al. 2020; Petrova et al. 2020). To the best of our knowledge, this is the first study that experimentally tests an edutainment campaign aimed at reshaping gender norms and VAW attitudes via a social media platform.

The remainder of this paper is structured as follows: Section 2 discusses the evidence base of edutainment and our study's research questions, Section 3 describes the study design and intervention, Section 4 shows the results, and Section 5 draws policy conclusions.

2 Theoretical framework

2.1 Edutainment and social norms

Systematic reviews of information-only campaigns tend to show limited effectiveness on behavior change (e.g., Ferri et al. 2013; McKenzie-Mohr 2000). Communication researchers argue that information-only campaigns often fail because their explicit messaging may trigger counter-arguing (Nyhan et al., 2014) especially for sensitive issues that require individuals to revisit their core values. Their lack of engaging narratives and identifiable role models may also prevent individuals from enhancing their self-efficacy beliefs (Singhal et al., 2003).

Regressive gender norms perpetuate VAW and gender discrimination, since the acts are justified by established beliefs and attitudes (Abramsky et al. 2011; Flood and Pease 2009). Such effects may be particularly strong for subgroups with lower social status (Goffman 1963; Hoff and Stiglitz 2010; Hoff and Walsh 2018; World-Bank 2014). Gender norms, driven by men and women's motivation to adjust their self-view to what seems socially appropriate (Akerlof and Kranton, 2000), can be important barriers in reducing gender gaps by becoming internalized into individual preferences. Social norms marketing campaigns[4] to improve

[4]Social norms marketing refers to traditional marketing techniques, including mass media and face-to-face campaigns, that are designed to alter individuals' perceptions about which attitudes and behaviors are typical

women's economic, political and social status are increasingly using edutainment. Through vicarious learning, people may acquire new information about social norms as well as ways of responding to social situations based on behaviors modeled by program characters (Bandura, 2004).

Field experiments of edutainment demonstrate that dramatized narratives are effective in promoting attitudinal and behavioral change across development sectors, including improving financial decision-making (Berg and Zia, 2017), increasing willingness to report corruption (Blair et al., 2019), reducing deference to authority (Paluck and Green, 2009), improving educational outcomes (Kearney and Levine, 2019), and promoting safer sexual behaviors (Banerjee et al. 2019*b*; Orozco-Olvera et al. 2019; W. Vaughan 2000; Wang and Singhal 2016).

The evidence base of edutainment in development economics has recently expanded to gender norms and VAW. In Nigeria, Banerjee et al. (2019*a*) showed that a short storyline on domestic violence embedded in the television drama MTV Shuga was effective in changing attitudes and behaviors related to domestic violence. In Uganda, Green et al. (2020) found that short advertisement clips during a film festival were effective in increasing audiences' willingness to report violence to police or community leaders and in decreasing reported incidence. In Mexico, Arias (2019) finds that a radio drama increased rejection of VAW and increased support for gender equality.[5] The Uganda and Mexico studies provide experimental evidence that effects were driven by the social channel, facilitated by the communal delivery of public information.[6]

The potential of social media platforms in delivering SBCC is greatly untapped in development. For instance, in India, where our study takes place, over 70 percent of individuals between 18 and 34 years used Facebook in 2018. Most of them spent between two and four hours on social media every day (Statista 2020). Despite their potential to reach many at low costs, social media are still overlooked by development programs. A potential reason is the general lack of empirical evidence on their effectiveness at achieving development objectives.

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or desirable in their community (Burchell et al., 2013; McKenzie-Mohr, 2000).

[5]These findings confirm quasi-experimental evidence that suggested that by exposing viewers to outside views and lifestyles in a dramatized format, communities' access to cable or to the "soap opera" channel were effective in improving gender outcomes in Brazil (La Ferrara et al., 2012) and decreasing acceptability of VAW in India (Jensen and Oster, 2009).

[6]This is in line with Bursztyn et al. (2020), who show that pluralistic ignorance – i.e., when most group members privately reject a group norm but publicly follow it as they believe that most members accept it (Miller and McFarland, 1987) – might be affecting men's willingness to allow women's participation in the labor force in Saudi Arabia.

2.2 Research questions

Our study aims to address two questions. First, can the above findings from edutainment be generalized to social media?[7] Theoretical arguments can be made for social media to be less or more effective than television, radio or film. On the one hand, the need for shorter clips for social media consumption may prevent users from effectively immersing in a program and identifying with characters.[8] The lack of a shared community viewing experience may prevent activating the social channel. Moreover, social media friends may not be a relevant group if users perceive them as too detached and unlikely to take any credible actions against VAW in their communities.

On the other hand, social media campaigns may theoretically be more effective than "offline" media. Online campaigns can be more effective in encouraging people to seek further information or take action (e.g., visit a website or donate to a social cause) as internet sites are a few clicks away. Social media usually exposes users to a larger number of friends and acquaintances, which can facilitate the spread of gender-equality norms, especially among youth. The ease with which users can publicly display their views (e.g., by posting on their Facebook walls) and share information online can help update perceptions of social norms in online communities. Online campaigns that are effective in encouraging users to publicly show their support for a social cause can potentially trigger a cascade of broader social support, as shown by online movements such as #MeToo (Levy and Mattsson, 2021).

The second question our study addresses is whether formats that deliver messaging in more implicit ways are more effective in influencing gender norms and VAW attitudes. Implicit formats such as fictional and humorous narratives could potentially reduce counterarguing, the thoughts that may dispute persuasive arguments (Benoit, 1987), and may create a safer space for audiences to consider new views.[9] Lab studies, mostly conducted in US colleges, show that people are more likely to remember and internalize messages when presented in a narrative format (Frank et al. 2015; Ochoa et al. 2020; Oliver et al. 2012). On the other hand, dramas could also trivialize social issues (Moyer-Gusé, 2008). Because documentaries are usually based on real-world people and situations, their "call for action" messaging could theoretically be more effective in influencing the social channel.

[7] With social media platforms engaging one in two people worldwide (Digital 2020), delivering edutainment campaigns through this medium could potentially be a scalable and cost-effective approach for reshaping gender-equality and VAW outcomes.

[8] Berg and Zia (2017) and Banerjee et al. (2019*a*,*b*) provide suggestive evidence that program impacts were mediated by program immersion and identification with characters.

[9] Lab studies indicate that audiences enjoying an entertainment program are less likely to question and rebut program messages through increased program transportation or immersion (Hall and Bracken 2011; Moyer-Gusé 2008).

3 This study

3.1 Study design

The study is a randomized control trial of short clips of edutainment campaigns designed to reshape gender norms, roles and VAW attitudes. The study, a partnership with the Population Foundation of India and the World Bank, sought consent from all study participants and received ethical clearance from Solutions IRB (IORG0007116).

We recruited 18-24-years-olds residing in New Delhi and six other large cities in northern India.[10] Study participants were recruited on Facebook and Instagram through a 1-week geo-targeted advertising campaign.[11] As participation incentives, individuals who completed the baseline and at least one follow-up survey were eligible for a lottery to win Samsung Galaxy smartphones or a "selfie" picture with a Bollywood celebrity.[12] Individuals who clicked on the ad banner were redirected to Facebook Messenger, where both the intervention and data collection surveys were delivered through Virtual Lab, a newly-developed open-source automated chatbot described by Rao et al. (2020).[13] This platform also allowed the research team to directly measure treatment adherence (i.e., viewership rates, an interesting outcome for edutainment campaigns) and therefore allowed for more reliable estimation of the treatment effect on the treated.

Of 33,000 users who clicked our Facebook ad, only 5,299 individuals filled the baseline survey. They were then randomized into treatment and control conditions. In both conditions, participants were shown between three and seven short edutainment video clips totaling up to 25 minutes. We measured program impacts one week and four months after the end of the intervention, what we refer to in the rest of the paper as short-term (n=606) and medium-term impacts (n=619), respectively. The timeline and structure of the study are described in Figure 1.

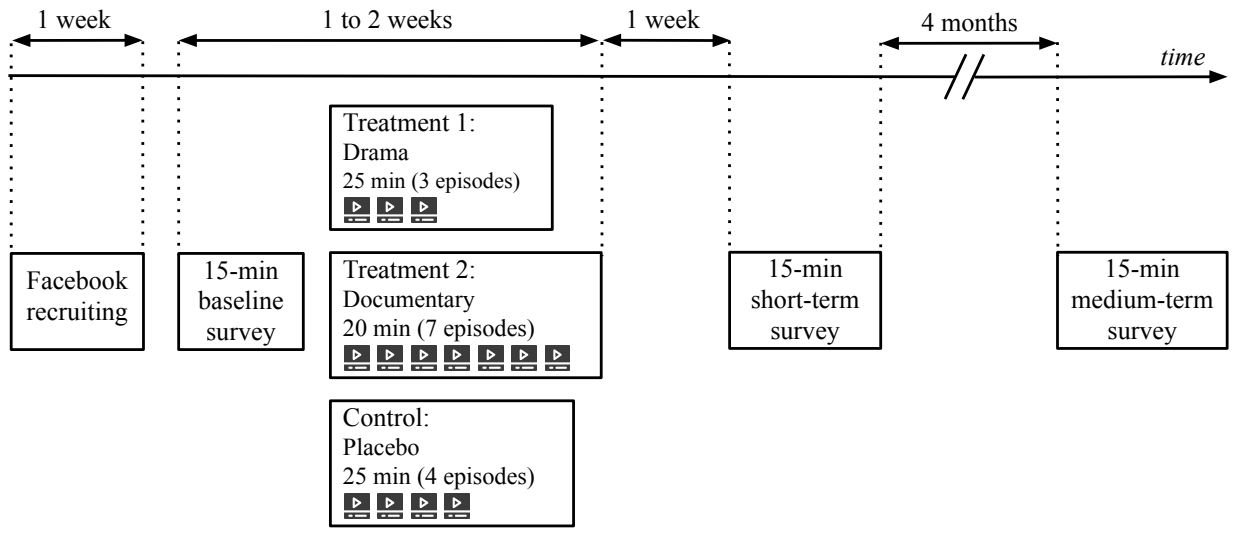
[10] We focused on younger people due to several reasons: (i) their larger presence on social media; (ii) their higher risks to be exposed to violence, for instance due to their lack of experience in dealing with intimate partner relationships (e.g., Borker et al. 2021); (iii) the tested interventions explicitly targeted youths.

[11] Figure B1 in the Appendix shows the geographic targeting and the ad content used in the recruiting campaign.

[12] The celebrity was Farhan Akhtar, a popular Indian actor, director, screenwriter and producer.

[13] Here is the website of the platform, while here is the GitHub repository of its code. Moreover, Appendix Figure B2 shows an example of its functioning.

Figure 1: Timeline of the study



3.2 Interventions

The studied edutainment content was produced by WEvolve, a multi-donor initiative supporting innovative campaigns against VAW, and Population Foundation of India, an NGO that advocates for the formulation and implementation of gender-sensitive development policies and programs. Both programs were of high-quality, with their content developed by professional teams and adjusted by extensive formative research with target audiences. To understand if explicit or implicit formats were more effective in influencing gender norms and VAW attitudes, we selected the following edutainment programs.

Treatment 1 (implicit) was a fake reality TV web series called Sex Ki Adalat (meaning Court of Sex). The program takes place in a fictitious court where myths and misconceptions around gender norms are discussed often in a humorous way. We showed three episodes of this series, for a total length of 25 minutes. These episodes focused on the determinants of the child's gender (sex selection at birth), female and male virginity at marriage, and the "menstruation ritual", which bans women from entering the kitchen or household shrine during their period.

Treatment 2 (explicit) was a series of WEvolve clips that aimed to raise awareness on VAW prevalence in India, including real-life stories and experiences from people similar to our target population (i.e., young, middle-class, city-dwelling Indians), with clear calls to action. The clips heavily used music and editing to be both contemporary and emotionally impactful and were often character-driven. Celebrities, including actor and screenwriter Farhan Akhtar, make appearances. We showed seven episodes for a total length of 20 minutes. The control group was exposed to a "placebo". In particular, respondents in this condition were invited to

watch Carbon, a short and engaging edutainment movie on climate change. The movie was delivered in four episodes, for a total length of 25 minutes.[14]

Treatment 1 and control video clips were in Hindi with English subtitles, while Treatment 2 was mainly in English.[15] For each arm, episodes were released in a staggered way. In particular, each new episode was delivered two hours after the individual self-confirmed to having watched the previous episode. Participants received reminders to encourage viewership and were free to choose when to watch the episodes. While this approach increased the duration of the total intervention – which took an average of 7-to-10 days for completion, depending on the arm – it mimicked the way competing content is commonly consumed and shared in social media platforms (e.g., Instagram reels), making the study more generalizable.

3.3 Outcomes and measures

We measure program impacts on three categories of outcomes: (1) creating awareness on gender norms and VAW in India, (2) changing attitudes regarding gender norms and condoning VAW, and (3) online information-seeking and posting behaviors related to gender issues. The first two sets of outcomes are self-reported and measured through the survey instrument. Specifically, awareness and knowledge questions cover issues explicitly discussed by the series. Attitudinal items aimed to measure gender norms and attitudes were derived from the India's National Family Health Survey.

In addition to self-reported data, we independently measured two online outcomes. First, we measured clicks and visit durations to gender- and environment-related website links provided in both short- and medium-term follow-up surveys. We hypothesized that the treatment group would be more likely to click and spend a longer time browsing gender websites as opposed to other topics.[16] Second, study participants were provided with the option to publicly display

[14]Specifically, the material is the following: Treatment 1: Sex Ki Adalat (E1) Male child, (E2) Virginity, (E3) Menstruation; Treatment 2: WEvolve clips; Control: Carbon.

[15]We believe that content comprehension is unlikely to drive our results considering that urban youth on social media tend to speak and understand both Hindi and English. Four in 10 respondents decided to fill surveys in English and the overall respondents' self-assessment of English comprehension was 5.5 on a 1-10 scale. We control for this covariate in all the regressions.

[16]Time spent visiting a website is extrapolated from data on link clicking collected by the Virtual Lab platform. Appendix Figure B2 shows an example of the provided buttons. Visit duration is calculated from the moment the respondents click on one link until the moment they click on the subsequent link. For this reason, we could not measure visit duration for the last link the respondent clicked. Since missing duration tends to be more frequent on the last websites, we focused the attention on those links which were provided at the beginning, namely the PFI and Delhi Green websites, and exclude from the analysis the UN Women India and the UN Environment Program India websites. An additional problem with measuring visit duration arises when the respondents click on one link, then close the browser (or phone) without any further action, and then return to visit another link at a later moment in time. In this case, our measure of visit duration

their disapproval of VAW through their Facebook profiles. This measure was operationalized by giving participants in the medium-term survey the opportunity to add a frame against VAW in their Facebook picture profile (frame in Appendix Figure B3).

Practically most attitudinal and behavioral measures were originally coded using a 5-point agreement scale. To facilitate the interpretation of the results, we transformed them into binary indicators, thus program impacts are reported as percentage point changes. To address the issue of multiple hypothesis testing, we group individual level outcomes into four topic indexes: (i) knowledge and awareness of existing gender norms and VAW, (ii) attitudes towards gender norms and roles, (iii) attitudes condoning VAW, and (iv) beliefs on others' attitudes. We additionally constructed a general index that aggregates the first three outcome indexes. We excluded the fourth, what users perceive to be the attitudes of their closest Facebook friends, because this measure is not a final outcome but rather a potential mediator – namely, the social channel – of the effect of the intervention on users' self-attitudes.

Individual items were aggregated into indexes following Kling et al. (2007), i.e., we constructed equally weighted averages of the z-scores of the variables that enter each index.[17] For robustness, we also used a second method based on principal component analysis. Appendix Tables A33 and A34 describe the individual items used per index, their factor loadings and the Cronbach's alpha. Variables were oriented so that the intended impact of treatments on each component of the index should be positive. Therefore, consistent with the gender objectives of the videoclips, higher values of each index reflect more progressive views. To facilitate interpretation of impacts on the outcome indexes, we also report their standard deviations in the control group at the respective follow-up.[18]

3.4 Empirical specification

We conducted two separate analyses for the short-term (n=606) and medium-term (n=619) follow-up samples. It is worth mentioning that individuals in these two samples were not necessarily the same. In particular, 42% of those who completed the medium-term survey also

would count the entire difference between the two visits as a visit to the first website. To correct for the related measurement error we assumed that all visits that lasted more than 2 hours were capturing time spent away from our websites. Hence, we discarded them by replacing the values with missing data.

[17] For missing values, we also followed Kling et al. (2007). Particularly, if a respondent has a non-missing value for at least one of the variables in an index, we impute any missing values for the other variables using the random assignment group mean. This implies that differences between treatment and control means of an index coincide with the average of treatment and control means of the variables in that index (when divided by their standard deviations).

[18] Impact effects are divided by standard deviations derived from the control group at follow-up. An increase of two standard deviations, for example, would move someone from having average knowledge to being in the top 5 percent of the group.

filled the short-term survey. This should mitigate the concern that the results could be driven by over-exposure to the questionnaire and its interaction with the treatment (e.g., recall bias). To recover the average treatment effects of the two series in the short and medium terms, we estimated the following linear model via OLS:

$$Y_{i,t=\{1,2\}} = \alpha + \beta\,\text{Treatment1}_{i,t=0} + \gamma\,\text{Treatment2}_{i,t=0} + \delta\,\mathbf{X'}_{i,t=0} + \varepsilon_{i,t=\{1,2\}} \tag{1}$$

where i is the individual, and t stands for the survey wave, namely, baseline ($t = 0$), short term ($t = 1$) and medium term ($t = 2$). Treatment 1 is a dummy indicator equal to 1 if the individual was assigned to the humorous drama with implicit messaging and 0 otherwise, while Treatment 2 equals 1 if the individual was assigned to the docuseries with explicit messaging and 0 otherwise. Y indicates the outcomes of interest, specifically, the general and topic indexes described previously as well as variables measuring information-seeking and posting behaviors.

Most of our outcomes were only collected at follow-ups. Given the experimental design, the lack of baseline values should not affect the causal interpretation of the results as both the treatment and control groups are identical in expectations (Bruhn and McKenzie, 2009). As shown below, this is further confirmed by observed balance for the pre-treatment values of observable characteristics and attitudinal self-reported outcomes. As such, we show plain estimates from a parsimonious specification with no controls. Nevertheless, to improve the efficiency of the estimator, we also report the results controlling for a series of socio-economic indicators measured at baseline, represented by vector $\mathbf{X'}$ in (1).[19] Among them, we always include an index measuring the baseline stance of the individual towards gender norms and VAW. Specifically, we rely on those few knowledge and attitudinal variables that were measured at baseline and aggregate them into an index – i.e., the Baseline Stance Index – which captures the ex-ante progressiveness of the respondents' view.[20] Finally, when the baseline values of standalone outcomes of interest were available, we also included them on the RHS of equation (1) to explicitly account for potential pre-existing imbalances in those outcomes among arms.

For individuals assigned to the control group, both the drama and documentary dummies are simultaneously equal to 0. Hence, the β and γ coefficients capture the ATE of being

[19] Selected controls were theoretically associated with outcomes or showed pretreatment imbalances and included age, gender, education, education of household head, religion, caste, occupation, relationship status, self-assessment of the English language, frequency of watching videos online, indicators for being a student, having sisters, having male friends beating partner or female friends beaten, and city-of-residence fixed effects.

[20] Table A32 describes the individual items used to construct this index, their factor loadings and the Cronbach's alpha.

assigned to the drama or documentary condition on the outcome of interest, respectively (or, alternatively, the ITT effects of the interventions). The tables also report the p-value of a Wald test on the hypothesis that $\beta = \gamma$. As randomization was done at the individual level, standard errors were not clustered, yet we adjusted them to account for heteroscedasticity. Individuals who completed the survey too fast, or whose responses on gender and age were not consistent across surveys were excluded from the analysis.[21]

The primary analysis was done through Intention-to-Treat (ITT) estimates. ITT analysis replicates better what happens in the "real world", incorporating individuals' non-compliance or poor adherence to the program. As a result, ITT estimates provide a lower-bound of program impacts. Treatment-on-the-Treated effects (ToT) were also estimated using the objective measure of viewership. For this purpose we defined as compliers those individuals in the treatment arms who clicked play on at least half of the assigned video clips, as recorded by the Virtual Lab platform. We instrumented this measure of viewership using the random assignment to the treatment conditions and estimated ToT effects. Given that no individual in the control group received the treatment,[22] our ToT estimates equal the Local Average Treatment Effect (LATE) of the interventions. The analysis reports effect sizes and two-sided p-values. The text discusses only results that are statistically significant at the conventional level of $p < 0.10$.

We also conducted heterogeneous effects analysis. For this purpose, the moderator variables and their interactions with the treatment variable were added to the specification in (1) (Gerber and Green, 2012). Given that the analysis was not pre-registered, in our post-hoc analysis we restricted the number of variables to those with a relatively clear theoretical relationship. We hypothesized that study participants would benefit less from the program if (i) they perceived their friends to be more conservative at baseline, through the incentive for public compliance with social references (Miller and McFarland, 1987); and (ii) if they belonged to groups with lower social status, who may experience the constraining influence of social norms particularly strongly (Goffman 1963; Hoff and Stiglitz 2010; Hoff and Walsh 2018; World-Bank 2014). The latter included the participants' gender, age, caste, membership in a social group and their and their parents' educational achievement.

[21] Specifically, 21 and 32 observations were dropped in the short- and medium-term analysis, respectively.

[22] This was ensured by preventing participants from being able to share the video clips. Moreover, for every video clip the bot collected all Messenger IDs of the viewers. This gave the research team full control of compliance for all individuals and all video clips.

4 Results

4.1 Response rates, randomization check and sample characteristics

Panel A of Table 1 shows that only 12% of the 5,229 baseline respondents completed either or both of the follow-up surveys. Attrition in the medium-term sample affected each arm equally. A similar finding applies to the short-term sample, with the only difference that in this case the explicit (Treatment 2) arm exhibits a lower response rate due to a technical constraint triggered by a policy change in Facebook Messenger while we were conducting the study.[23]

The low follow-up response rates naturally affect the study's statistical power, especially for the medium-term survey, where the magnitude of the effects are generally smaller.[24] Low response rates could also jeopardize the external validity of the study if individuals with certain characteristics have a higher propensity to complete the study. Annex Table A1 compares pre-intervention characteristics of those respondents who filled the follow-up surveys with those who only completed the baseline and never continued. We find evidence of self-selection into study completion with respect to gender-related outcomes, though the different samples are generally similar across most socio-demographic characteristics.[25] Since respondents in the final samples had ex-ante more progressive views, we expect our estimates on knowledge and attitudes to represent a lower-bound of the campaign impact, because of the lower margins for improvements in the higher baseline values.

To assess whether attrition invalidated the randomization strategy, which may pose a threat to internal validity, Annex Tables A2 and A3 show differences in sample means between experimental groups of outcomes and covariates measured at baseline, only for those re-

[23]The new policy, which has since been modified again, prevented chatbots from sending automated follow-up messages. It went into effect one week after we began our study, which forced us to compress the timing and send the follow-up survey exactly one week after the study began, before the new policy prevented the follow-up from being sent. This disproportionately affected the documentary watchers, as they had more episodes to watch. While many were contacted manually later, they were still less likely to respond.

[24]The study's initial power calculations estimated a two-sided test with power of 0.8, alpha of 0.05 and no intra-cluster correlation for the question "Do you think a husband is justified in hitting or beating his wife if he suspects her of being unfaithful" among 18-24 individuals living in urban India (NFHS-4). To detect a six-percentage point increase in this outcome, each treatment arm required around 500 observations. However, each follow up survey had approximately 200 observations per arm.

[25]The two panel subsamples tend to exhibit overall more progressive attitudes than the only-baseline subsample, and the differences are generally statistically significant. For instance, panel subsamples are less likely to justify domestic violence and more willing to report it. This is a consequence of this study trying to replicate the real world, where media consumption is an individual choice and tends to be biased. At the same time, it also suggests that program content matters and raises the potential concern that even the implicit format (a humorous fake reality TV show) could fail to attenuate self-selection into viewership by reaching and engaging individuals with different interests. On the other hand, the different subsamples are generally similar across socio-demographic characteristics, with the exception of female respondents, respondents with sisters and respondents with high media consumption who are all more likely to complete the two follow-ups.

Table 1: Survey response, treatments' take-up and objective compliance

	All arms (1)	*Treatment 1* Drama (2)	*Treatment 2* Documentary (3)	*Control* Placebo (4)
Panel A: Survey response				
Baseline respondents	5,229	1,791	1,783	1,655
Share (% out of baseline)	*100*	*100*	*100*	*100*
Short-term survey (1 week) respondents	606	258	128	220
Share (% out of baseline)	*11.59*	*14.41*	*7.18*	*13.29*
Medium-term survey (4 months) respondents	619	212	200	207
Share (% out of baseline)	*11.84*	*11.84*	*11.22*	*12.51*
Panel B: Overall take-up and compliance				
Self-reported to complete intervention	2,328	939	584	805
Share (% out of baseline)	*44.52*	*52.43*	*32.75*	*48.64*
Self-reported to watch half or more	3,153	1,169	831	1,153
Share (% out of baseline)	*60.30*	*65.27*	*46.61*	*69.67*
Actually played half or more	1,849	762	345	742
Share (% out of baseline)	*35.36*	*42.55*	*19.35*	*44.83*
Panel C: Short-term sample compliance				
Share of respondents who played half or more (%)	78.38	81.01	67.97	81.36
Mean duration of intervention (days)	8.9	8.4	10.0	8.8
Panel D: Medium-term sample compliance				
Share of respondents who played half or more (%)	66.07	75.00	49.00	73.43
Mean duration of intervention (days)	8.2	7.0	10.6	7.2

Notes: Panel B reports numbers for all respondents who completed the baseline survey. Panels C and D restrict the attention to respondents who completed the short-term and medium-term surveys, respectively. Treatment compliance is objectively measured by the bot. In particular, for each respondent and video, the bot recorded specific browsing events such as play, pause and end.

spondents who completed the short-term and medium-term follow-up surveys, respectively. Overall, we find no evidence that the high attrition rates led to a differential self-selection into study completion across treatment assignments along observable characteristics. In fact, we generally observe baseline balance in both outcome and control variables between treatment and control groups for both follow-up samples, although this does not rule out potential imbalances across experimental groups in latent characteristics.[26] Pre-treatment differences between experimental groups are generally small and not statistically significant, including outcomes such as justification of violence and acceptance of pre-marital sex. For the few statistically significant differences, these tend to be small in magnitude and are accounted for in the analysis by the inclusion of the Baseline Stance Index.[27] Taken together, we find

[26] Annex Table A4 shows balance among experimental conditions in the full baseline sample too.

[27] For standalone outcome variables that were also collected at baseline, we include their baseline values (instead of the Baseline Stance Index) on the RHS of equation (1) to control for potential pre-existing

no evidence that the internal validity of the study is jeopardized by attrition bias (Dumville et al., 2006).

Annex Table A1 also provides a description of the short-term and medium-term samples. Overall, these samples consist of highly educated and typically unmarried individuals. Females represent about a quarter of them.[28] More than four in ten report belonging to socially and economically disadvantaged castes. Individuals in the sample hold mixed attitudes towards gender norms and VAW. For example, while a large majority believes that women should be able to wear clothing of their choice, almost a quarter thinks that women should be banned from the kitchen/shrine during menstruation or justifies VAW in cases of unfaithfulness.

4.2 Take-up rates and objective compliance

Panel B of Table 1 shows viewership statistics of the media campaigns for the full baseline sample. The data suggests that the drama (treatment 1) and placebo movie experienced higher viewership rates compared to the documentary (treatment 2), potentially due to their higher entertainment content. While 65% of treatment 1 viewers self-reported watching half or more clips, only 47% of treatment 2 individuals reported doing so. The objective metrics, as measured by click data, confirmed higher take-up rates for treatment 1, compared to treatment 2, and provided overall insights into intervention compliance. These show that around 25% of people in any arm over-reported watching more than half of the videoclips (35% vs. 60%), though over-reporting was more-or-less similar across treatment arms.[29]

Panels C and D of Table 1 provide information on compliance with the intervention for the two follow-up samples, using click data from the video "play" events. These data will also be used to estimate the Treatment-on-the-Treated effects, which thus will account for any differences in viewership across experimental arms. About 78% and 66% of respondents in the short-term and medium-term samples played half or more of the assigned series, respectively. Viewership patterns across treatment arms follow the general trends, with the docuseries being the least watched. In particular, information on mean duration of the intervention reported in panels C and D indicate that users assigned to watch this explicit format took

differences across treatment arms.

[28] Despite our efforts in stratifying the Facebook recruitment by gender, we could not reach gender balance in the final sample. This mainly depends on the much higher costs to recruit females because of the widespread gender gap on social media presence, especially in Southeast Asia (Fatehkia et al., 2018).

[29] We cannot fully attribute the take-up difference to the entertainment format as the number of video clips for the documentary was 7 as opposed to 3 for the drama, and video clips were released every 2 hours (conditional on self-reporting that the previous one had been watched). Thus, the take-up differences may be partly explained by a larger number of episodes. On the other hand, the total time was longer for the drama compared to the documentary (25 and 20 minutes respectively).

over 2 days more to finish it.

4.3 Short-term impacts (one week after potential exposure)

Panel A and B of Table 2 presents the Intent-to-Treat and Treatment-on-the-Treated estimates of the two series on the five indexes previously described. Higher values of the indexes indicate more progressive stances. Odd and even columns respectively report estimates with and without control variables described in Section 3.4. For almost all outcome indexes, point-estimates for both specifications are very similar, which gives reassurance that selection issues are unlikely to affect our estimates. For readability, the text discusses results of the specification with control variables unless noted otherwise.

4.3.1 Self-reported outcomes

The humorous drama (treatment 1) had economically and statistically significant effects on all outcome indexes in the short-term. The positive effect on the global index indicates a progressive overall shift of about 0.25 standard deviations (SDs). With respect to the control group, we observe improvements on knowledge and awareness of 0.21 SDs, improvements on gender norm/role attitudes of 0.20 SDs, and decreases in condoning violence against women of 0.16 SDs. Moreover, ToT estimates reported in Panel B of Table 2 exhibit even larger effects on program viewers, as coefficients for having played half or more of the assigned video clips are about 25% higher than ITT estimates. This is especially important because if the effects were entirely driven by social desirability bias (i.e. respondents pleasing the researcher as they realized the link between the survey and exposure to an anti-VAW campaign), one would not necessarily expect them to be different based on actual viewing time.[30]

In the case of the docuseries (treatment 2), the coefficient of interest is only statistically significant for the global index, again indicating a shift towards more progressive attitudes. However, its magnitude (0.12 SDs) is half compared to the coefficient of treatment 1 and the difference is statistically significant. For the other three subindexes, the coefficients are in the intended direction but are not statistically significant. This may be partly driven by the program's adverse effects on the social norm index (columns 9-10 of Table 2): for individuals in treatment 2, the program increased the perception that more of their Facebook friends had conservative stances by approximately 0.34 SDs, while the coefficient is statistically

[30]However, we cannot discard the possibility that observed impacts may be partly driven by our chatbot technology: having a chatbot inviting study participants to watch the different video clips and then follow up with questions about the topic could be itself an effective mode of reflecting on the watched content and changing viewers' attitudes.

Table 2: Short-term impacts on outcome indexes

Panel A: ITT estimates

Dep. Var. (Y):	*Global index*		*Knowledge*		*Gender norms/roles*		*VAW attitudes*		*Beliefs others' attit.*	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Drama	0.188***	0.143***	0.199***	0.168***	0.182***	0.130***	0.192**	0.154**	-0.088	-0.117
	(0.051)	(0.035)	(0.068)	(0.064)	(0.058)	(0.042)	(0.089)	(0.074)	(0.086)	(0.086)
Documentary	0.091	0.068*	0.071	0.064	0.083	0.055	0.146	0.119	-0.242**	-0.307***
	(0.060)	(0.038)	(0.077)	(0.074)	(0.070)	(0.047)	(0.103)	(0.086)	(0.107)	(0.100)
Controls		✓		✓		✓		✓		✓
R-squared	0.020	0.585	0.012	0.122	0.014	0.516	0.005	0.338	0.005	0.086
P-value equal coef.	0.088	0.043	0.067	0.125	0.127	0.099	0.639	0.672	0.151	0.060
Observations	606	606	606	606	606	606	606	606	606	606
Mean Y (Control)	-0.059	-0.059	-0.034	-0.034	-0.062	-0.062	-0.084	-0.084	0.106	0.106
SD Y (Control)	0.582	0.582	0.785	0.785	0.660	0.660	0.991	0.991	0.904	0.904

Panel B: ToT estimates

Dep. Var. (Y):	*Global index*		*Knowledge*		*Gender norms/roles*		*VAW attitudes*		*Beliefs others' attit.*	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Play Drama	0.232***	0.179***	0.245***	0.210***	0.225***	0.163***	0.237**	0.193**	-0.109	-0.150
	(0.063)	(0.042)	(0.083)	(0.078)	(0.071)	(0.052)	(0.109)	(0.090)	(0.106)	(0.105)
Play Documentary	0.134	0.104*	0.105	0.097	0.122	0.083	0.215	0.180	-0.356**	-0.460***
	(0.087)	(0.056)	(0.112)	(0.108)	(0.101)	(0.068)	(0.150)	(0.126)	(0.163)	(0.154)
Controls		✓		✓		✓		✓		✓
R-squared	0.037	0.587	0.017	0.122	0.025	0.515	0.018	0.341	−0.025	0.049
P-value equal coef.	0.209	0.130	0.147	0.226	0.252	0.198	0.872	0.906	0.114	0.034
Observations	606	606	606	606	606	606	606	606	606	606
Wald F-statistic	265.5	231.3	265.5	231.3	265.5	231.3	265.5	231.3	265.5	231.3
Mean Y (Control)	-0.059	-0.059	-0.034	-0.034	-0.062	-0.062	-0.084	-0.084	0.106	0.106
SD Y (Control)	0.582	0.582	0.785	0.785	0.660	0.660	0.991	0.991	0.904	0.904

Notes: Heteroscedasticity-robust standard errors in parentheses. The Global index is composed by indexes for individuals' knowledge, gender norms/roles and VAW attitudes; excluding individuals beliefs on others' attitudes. Higher values of the indexes in (1) to (8) stand for more progressive stances. The index "Beliefs on others' attitudes" reported in (9) and (10) takes higher values when the respondents believe that a larger share (out of 10) of their closest Facebook friends have progressive attitudes. Controls include: Baseline Stance Index, age, gender, education, education of household head, religion, caste, occupation, relationship status, self-assessment of the English language, frequency of watching videos online, indicators for being a student, having sisters, having male friends beating partner or female friends beaten, and city-of-residence fixed effects. All controls are measured at baseline. In Panel B, independent variables Play Drama and Play Documentary take value 1 if the respondent has played half or more of the assigned video clips, as objectively recorded by the bot. These variables are instrumented using the random assignment indicators to the treatment groups. The first-stage Wald F-statistic is reported. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

insignificant for treatment 1.[31] This unintended effect may potentially be explained by the awareness goal of the docuseries: by showcasing how prevalent VAW is in Indian society, users may have inferred this was also the case in their social circles. Finally, Annex Table A15 shows that quantitatively similar coefficients are obtained when using indexes constructed with principal component analysis.

[31]Annex Table A9 reports impacts on individual items that make up the social norms index. It shows that an increased number of individuals in treatment 2 believed that their Facebook friends were against pre-marital sex for men, and that their friends would condone domestic violence when wives were either unfaithful or went out without permission of their husbands.

Annex Tables A5 to A8 present ITT results for the individual outcomes that compose the above indexes.[32] Specifically, Annex Table A5 shows that the main messages delivered per treatment arm were absorbed by their respective audiences in a consistent manner with the content. While treatment 1 increased knowledge that fathers determine the sex of children (an increase of 12 p.p. or 38% with respect to the control's mean) and awareness of the prevalence of specific gender rituals like the menstruation and virginity rituals (an increase of 7.3 p.p. or 25%), treatment 2 made study participants aware that VAW is a major issue in India by 8.3 p.p., an increase of 11%.

While neither intervention had impacts on the broader and potentially harder to change attitudes towards gender roles (Annex Table A6), treatment 1 impacted most outcomes related to challenging existing gender norms (Annex Table A7). In particular, treatment 1 made respondents more critical of blindly following adverse social norms by 7.2 p.p. (or 14% with respect to the control), less likely by 7 p.p. (9% decrease) in believing that women should be virgin until marriage, less likely by 8.3 p.p. (24% decrease) to believe women should be banned from the kitchen or household shrine during menstruation, and more likely by 6 p.p. (7% increase) to believe that women should be able to wear whatever they want without fear of sexual harassment. The latter outcome was also affected by treatment 2 (an increase of 6.8 p.p., or 8%), which had an explicit episode on women's freedom of dressing. Yet, treatment 2 had no other short-term impacts on outcomes related to challenging existing gender norms.

On outcomes measuring attitudes that condone VAW (Annex Table A8), treatment 1 decreased the likelihood of individuals justifying domestic violence if a wife went out without her husband's permission by 7.5 p.p (27% decrease), and increased the likelihood that individuals would not be passive bystanders. The treatment group was 9.2 p.p more willing to report if a friend experienced physical violence, an increase of 11% with respect to the control. Again, treatment 2 had no effects on attitudes that condone VAW.

4.3.2 Content sharing intentions

In line with its call-to-action messages, treatment 2 was effective in increasing participants' willingness to share the campaign videoclips with their Facebook friends.[33] Specifically, columns (1-2) of Table 3 show that individuals assigned to treatment 2 were 5 p.p. more likely to report a greater willingness to share the docuseries with their Facebook friends right after the intervention, an increase of 9.4% with respect to the control. The significant differences between treatment arms indicate that only the docuseries was effective, while treatment 1

[32] For the sake of conciseness, we omit results for individual items when they are statistically insignificant.
[33] Note that this is just a measure of willingness to share the clips, and not actual sharing/posting.

was not. ToT estimates reported in columns (3)-(4) are in line with the previous findings and show that the effect of the docuseries on viewers precisely doubled.

Table 3: Impact on willingness to share the videos right after the intervention

Dep. Var. (Y):	*Willing to share videos with Facebook friends*			
	(1)	(2)	(3)	(4)
	ITT	ITT	ToT	ToT
Drama	-0.023	-0.025		
	(0.024)	(0.024)		
Documentary	0.060**	0.050*		
	(0.027)	(0.027)		
Play Drama			-0.035	-0.037
			(0.037)	(0.036)
Play Documentary			0.125**	0.105*
			(0.057)	(0.057)
Controls		✓		✓
R-squared	0.003	0.033	−0.001	0.029
P-value equal coef.	0.002	0.005	0.002	0.005
Observations	2269	2269	2269	2269
Wald F-statistic			444.5	432.9
Mean Y (Control)	0.529	0.529	0.529	0.529

Notes: The sample considered here is made of all participants who self-reported to complete the intervention. Heteroscedasticity-robust standard errors in parentheses. Controls are described in the notes to Table 2. In columns (3)-(4), independent variables Play Drama and Play Documentary take value 1 if the respondent has played half or more of the assigned video clips, as objectively recorded by the bot. These variables are instrumented using the random assignment indicators to the treatment groups. The first-stage Wald F-statistic is reported. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

4.3.3 Information-seeking behaviors

Panel A of Table 4 shows that both treatment arms were effective in promoting information-seeking behaviors, with effects generally being larger for treatment 2 (though impact differences between treatment arms are not statistically significant). Individuals in treatment 1 and treatment 2 were respectively 7.3 and 10 p.p. more likely to click on both gender-equality-related websites provided to them at the end of the survey, which represented increases of 85% and 116%, respectively.

The impact on time spent visiting these websites was almost twice as large for those treated with treatment 2 compared to treatment 1. While individuals in treatment 1 spent on average an additional 2 minutes on the websites (compared to the control's average of half a minute), individuals in treatment 2 spent an additional 3.4 minutes, which is 5.6 times longer than the average visit duration in the control group. As expected, we observe no significant effects on the likelihood of clicking climate-change-related websites nor on the time study participants

Table 4: Short-term impacts on clicks on informative links

Panel A: ITT estimates

Dep. Var. (Y):	*Click gender-links*		*Click climate-links*		*Duration gender-link*		*Duration climate-link*	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Drama	0.080***	0.073**	0.028	0.024	108.802*	118.461*	2.892	-1.403
	(0.030)	(0.031)	(0.031)	(0.032)	(60.060)	(62.303)	(68.719)	(56.626)
Documentary	0.101**	0.100***	0.041	0.044	181.815**	204.119**	29.871	17.582
	(0.039)	(0.039)	(0.040)	(0.039)	(91.531)	(103.121)	(89.654)	(84.350)
Controls		✓		✓		✓		✓
R-squared	0.012	0.022	−0.001	0.024	0.005	0.002	−0.003	0.035
P-value equal coef.	0.617	0.512	0.745	0.595	0.482	0.451	0.746	0.787
Observations	606	606	606	606	543	543	554	554
Mean Y (Control)	0.086	0.086	0.123	0.123	36.371	36.371	116.112	116.112

Panel B: ToT estimates

Dep. Var. (Y):	*Click gender-links*		*Click climate-links*		*Duration gender-link*		*Duration climate-link*	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Play Drama	0.099***	0.092**	0.035	0.030	136.594*	153.456**	3.642	-1.554
	(0.037)	(0.037)	(0.039)	(0.038)	(75.036)	(76.877)	(86.312)	(70.611)
Play Documentary	0.149***	0.150***	0.061	0.067	261.637**	300.831**	43.312	25.846
	(0.057)	(0.056)	(0.058)	(0.057)	(130.735)	(145.898)	(129.589)	(121.172)
Controls		✓		✓		✓		✓
R-squared	0.021	0.032	0.007	0.032	0.012	0.009	−0.003	0.035
P-value equal coef.	0.391	0.297	0.641	0.492	0.383	0.339	0.734	0.782
Observations	606	606	606	606	543	543	554	554
Wald F-statistic	265.5	231.3	265.5	231.3	309.5	253.3	292.3	252.5
Mean Y (Control)	0.086	0.086	0.123	0.123	36.371	36.371	116.112	116.112

Notes: Heteroscedasticity-robust standard errors in parentheses. In columns (1)-(2), the dependent variable takes value 1 if the respondent clicked on both gender links (PFI and UN women India). In columns (3)-(4), the dependent variable takes value 1 if the respondent clicked on both climate links (Delhi Green and UN environment program India). Visit duration is measured in seconds, and it refers to the PFI website in columns (5)-(6) and to the Delhi Green website in columns (7)-(8). Controls are described in the notes to Table 2. In Panel B, independent variables Play Drama and Play Documentary take value 1 if the respondent has played half or more of the assigned video clips, as objectively recorded by the bot. These variables are instrumented using the random assignment indicators to the treatment groups. The first-stage Wald F-statistic is reported. * p < 0.10, ** p < 0.05, *** p < 0.01

spent on these websites. These findings are confirmed in the ToT analysis reported in Panel B, where the magnitudes of the estimated coefficients are about 25% to 50% higher than ITT results.

4.4 Medium-term impacts (four months after potential exposure)

4.4.1 Self-reported outcomes

Table 5 presents medium-term results of ITT and ToT estimates. Most coefficients are in the direction of more progressive attitudes towards gender norms. However, the data suggests

a time-decay in effects, with program impacts decreasing over time in both magnitude and statistical significance.[34]

Table 5: Medium-term impacts on outcome indexes

Dep. Var. (Y):	*Global index*		*Knowledge*		*Gender norms/roles*		*VAW attitudes*		*Beliefs others' attit.*	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	ITT	ToT	ITT	ToT	ITT	ToT	ITT	ToT	ITT	ToT
Drama	0.046		-0.031		0.086**		0.028		0.042	
	(0.035)		(0.061)		(0.042)		(0.068)		(0.089)	
Documentary	0.028		0.026		0.035		0.015		0.097	
	(0.034)		(0.060)		(0.040)		(0.072)		(0.085)	
Play Drama		0.061		-0.041		0.114**		0.037		0.056
		(0.045)		(0.079)		(0.054)		(0.088)		(0.115)
Play Documentary		0.056		0.053		0.070		0.030		0.197
		(0.068)		(0.118)		(0.080)		(0.144)		(0.169)
Controls	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
R-squared	0.537	0.542	0.129	0.129	0.480	0.485	0.290	0.292	0.074	0.079
P-value equal coef.	0.583	0.929	0.367	0.386	0.191	0.520	0.856	0.958	0.529	0.342
Observations	619	619	619	619	619	619	619	619	619	619
Wald F-stat		116.9		116.9		116.9		116.9		116.9
Mean Y (Control)	-0.019	-0.019	0.018	0.018	-0.028	-0.028	-0.033	-0.033	-0.049	-0.049
SD Y (Control)	0.530	0.530	0.628	0.628	0.594	0.594	0.839	0.839	0.903	0.903

Notes: Heteroscedasticity-robust standard errors in parentheses. The Global index is composed by indexes for individuals' knowledge, gender norms/roles and VAW attitudes; excluding individuals beliefs on others' attitudes. Higher values of the indexes in (1) to (8) stand for more progressive stances. The index "Beliefs on others' attitudes" reported in (9) and (10) takes higher values when the respondents believe that a larger share (out of 10) of their closest Facebook friends have progressive attitudes. Controls are described in the notes to Table 2. Independent variables Play Drama and Play Documentary take value 1 if the respondent has played half or more of the assigned video clips, as objectively recorded by the bot. These variables are instrumented using the random assignment indicators to the treatment groups. The first-stage Wald F-statistic is reported. * p $<$ 0.10, ** p $<$ 0.05, *** p $<$ 0.01

For treatment 1, we only observe statistically significant effects for the index for attitudes toward gender norms/roles. The medium-term ITT estimate indicates an increase of 0.15 standard deviations with respect to the control, approximately three-fourths of the short-term magnitude. The ToT estimate indicates that the effect of the treatment on those who played half or more of the series is 0.19 SDs. For treatment 2, similar to our short-term results, we see no statistical effects on topic indexes and the global index. Interestingly, the social norms index is no longer negative (as in the short-term survey), though the effect is not statistically significant. Finally, Annex Tables A16 shows that using indexes constructed with principal component analysis yields quantitatively similar results.

Annex Tables A10 to A13 present ITT results for the individual outcomes that compose the above topic indexes. Results are consistent with the time-decay explanation, with the size of

[34]Because the short- and medium-term panels have very similar sample sizes (n=606 and 619 respectively), a larger sample size would be required to statistically detect the smaller effect sizes observed in the medium term survey.

coefficients and their statistical significance decreasing in the medium term. Nevertheless, some impacts persist. In particular, the humorous fake reality TV drama is found to make viewers less likely by 13 p.p. (which is equivalent to 33% of the mean in the control) to believe women should be banned from the kitchen or household shrine during menstruation and 7.3 p.p. less likely (24% decrease) to think that it is more important that a boy goes to school than a girl. Treatment 2 also impacted the latter outcome by 8.8 p.p. (30% decrease) and increased the awareness of VAW being an issue in India by 7.8 p.p. (10% increase). For the latter, the coefficient is similar in magnitude to the short-term estimate.

4.4.2 Information-seeking and posting behaviors

The short-term effects on information-seeking behaviors disappeared in the medium term (Annex Table A14).[35] On the other hand, treated participants were more willing than control participants to publicly display their disapproval of VAW in the medium term.[36] Columns (1)-(3) of Table 6 show that treatment 2 made participants more likely to intend to add the frame against VAW in their Facebook profile picture. While ITT estimates indicate an impact of 7.9 p.p. (32% increase), ToT estimates are twice as large (16 p.p.). Results are much smaller in magnitude and not statistically significant for treatment 1.

Most importantly, treatment 2 was effective in making individuals actually update their profile picture. ITT estimates indicate that participants in treatment 2 were 7.5 p.p. more likely than the control to add the VAW frame "End violence against women" to their picture, an increase of 91% ($p<0.05$). ToT estimates were twice as large: individuals who watched at least half of the documentaries were 15.3 p.p. more likely to add the banner, an increase of almost 190% ($p<0.05$). For treatment 1, the observed increases are not statistically significant.

Although these impacts were recorded only four months after program exposure, we were able to observe their potential cascade effects within the social network in the long run. We found that about one and a half years after the frame was first presented to the respondents, it was used by more than 34,000 people all over the world.[37] This is 55 times larger than the sample receiving the frame at first, and almost 500 times larger than the number of respondents who used it initially. Back-of-the-envelope calculations suggest that treatment 2 alone was responsible for about 6,300 of such uses.

[35] We discard the possibility that recall bias from the short-term survey drives this result. In fact, we find no medium-term information-seeking effects even when focusing on the subsample of individuals who were not interviewed at the short-term followup (58%).

[36] This outcome was only measured in the four-month data collection.

[37] The figure was objectively measured by the Facebook Frame Manager.

Table 6: Medium-term impacts on updating profile picture

Dep. Var. (Y):	*Intent to update*			*Actual picture update*		
	(1)	(2)	(3)	(4)	(5)	(6)
	ITT	ITT	ToT	ITT	ITT	ToT
Drama	0.056	0.054		0.026	0.029	
	(0.044)	(0.044)		(0.029)	(0.029)	
Documentary	0.079*	0.079*		0.068**	0.075**	
	(0.045)	(0.047)		(0.032)	(0.034)	
Play Drama			0.071			0.039
			(0.057)			(0.037)
Play Documentary			0.161*			0.153**
			(0.093)			(0.067)
Controls		✓	✓		✓	✓
R-squared	0.002	0.011	0.012	0.004	0.001	0.002
P-value equal coef.	0.614	0.588	0.281	0.211	0.192	0.069
Observations	619	619	619	619	619	619
Wald F-stat			117.0			117.0
Mean Y (Control)	0.246	0.246	0.246	0.082	0.082	0.082

Notes: Heteroscedasticity-robust standard errors in parentheses. Controls are described in the notes to Table 2. Independent variables Play Drama and Play Documentary take value 1 if the respondent has played half or more of the assigned video clips, as objectively recorded by the bot. These variables are instrumented using the random assignment indicators to the treatment groups. The first-stage Wald F-statistic is reported. * p < 0.10, ** p < 0.05, *** p < 0.01

4.5 Treatment effect heterogeneity

Annex Tables A17 to A30 present heterogeneous effects across a series of social status indicators, where we hypothesized that effects would be smaller for groups with lower social status (World-Bank 2014). We find no evidence of heterogeneous impacts by individuals' age, caste, educational achievement or membership in a social group in the short-term. However, both treatment arms generally were less effective for women and for individuals whose household-heads were on average more educated. Heterogeneous effects across gender persisted in the medium term, while those across household-head education vanished. Contrary to our hypothesis, in the medium-term we observe larger effects for less educated individuals in terms of the Global Index as well as the gender norms/roles and VAW indexes. This could be explained by the lower baseline values of the outcomes for these groups of individuals, which therefore had higher margins of improvements.

Annex Tables A22 and A29 present the heterogenous analysis for participants' perceptions of the conservatism of their Facebook friends prior to the intervention. We study these effects to test our hypothesis that perceptions of public acceptance of regressive social norms affects treatment impacts (Miller and McFarland, 1987). For the short- and medium-term samples,

we generally find that both treatments had smaller impacts on gender norms attitudes and VAW indexes for individuals who reported having friends with more conservative views on gender-related topics. This result is consistent with theories suggesting that people's beliefs and behaviors are influenced by their perception of prevalent social norms (e.g., Bicchieri 2005, 2016).

4.6 Placebo estimates

Given that our surveys and video interventions were delivered on the same Facebook Messenger platform, social desirability bias could potentially be affecting our estimates. To mitigate this concern, both follow up surveys included a series of placebo questions that should not be affected by our treatments (unless respondents were trying to please the researchers with an expected answer). Appendix Table A31 presents impacts on placebo outcomes, such as thinking that climate change is a threat to humankind, willingness to vote for better fuel-efficient cars, thinking to be working in a paid job in two years' time, or thinking that corruption is an issue in India. We find no evidence of social desirability bias for the short-term (Panel A) and the medium term (Panel B) samples.

5 Discussion

Social media platforms engaged around 4.1 billion users in 2020, more than half of the world's population (Digital 2020). By reaching large segments of the population, social media could potentially be used to correct beliefs' distortions, challenge gender stereotypes, and discuss misconceptions about socially harmful practices at scale and at low cost. Complementing evidence that shows the effectiveness of edutainment at reshaping VAW attitudes and behaviors in community settings, our study shows that social media, with its more private consumption of information, can also be an effective medium. In addition to testing a new delivery mechanism – namely, Facebook Messenger versus community screenings or radio – we are able to objectively measure new behavioral outcomes (i.e., likelihood to click and time spent on pro-gender-equality websites and public displays indicating disapproval of VAW by adding a frame to Facebook profile pictures).

Our study provides empirical evidence that edutainment delivered through social media can be an effective tool for reshaping gender norms and VAW attitudes. Our results show that in the short-term (1 week after the intervention), the drama was effective at increasing knowledge and awareness of gender practices and shifting gender norms towards more progressive stances. Moreover, both implicit and explicit formats increased short-term information

seeking behaviors on the web, yet most of our outcomes experience time-decay effects in the medium-term (four months after the intervention). On the other hand, the docuseries was successful in encouraging social media users to take a public stance within their online communities against VAW in the medium-term. In fact, this treated group was more likely (i) to report a willingness to share the video clips with their Facebook friends; and (ii) to add the frame "End violence against women" to their Facebook profile picture. At the same time, the drama had short-term adverse effects on the users' perceptions of the attitudes of their Facebook friends, a fact that highlights the risks of raising awareness of social issues. This points out the importance of investing in high-quality edutainment, which is better positioned to convey educational messaging without triggering counter-arguing (Benoit, 1987).

In our post-hoc analysis of treatment effect heterogeneity, we observe smaller effects for females and individuals that at baseline perceived their Facebook friends to be more conservative. However, we find no evidence that the intervention had differential effects for a series of social status indicators, including age, caste, membership in a social organization, and individual and parental educational achievement. The general lack of heterogeneous effects across social status indicators suggest social media as a potential medium for reaching different online populations, including vulnerable ones.

Some knowledge gaps that follow from this study's findings would benefit from further research. This study incentivized individuals to watch edutainment videos, whereas a real-world campaign would rely on users discovering the content through ad campaigns. Future experimental research should address this gap by randomizing and evaluating social media campaigns at a level more relevant for marketing campaigns (e.g., neighborhoods or media markets). Future VAW research should also scale up the use of innovative online measurements, such as crowdsourcing safety data from mobile applications (e.g., Borker et al. 2021; Kondylis et al. 2020). In light of our findings that large effects diminished in the medium-term, greater research is needed to understand how best to design reinforcer campaigns for long-term impacts.

To conclude, this study provides experimental evidence that social media campaigns that used "low-touch" edutainment were effective at reshaping gender norms and reducing the acceptability of VAW. This evidence is particularly promising in low-resource settings, where resource-intensive campaigns may be costly to scale. The massive diffusion of our VAW banner in social networks highlights the power of social media in amplifying content and opinions through online sharing. In this respect, our results lend support to the possibility of achieving a self-sustained virtuous circle of social change in online communities.

Appendices

A Tables

Table A1: Self-selection into completion of follow-up surveys

	Mean Complete only baseline N=4232 (1)	*Mean* Complete short term N=606 (2)	*Mean* Complete medium term N=619 (3)	*Norm.Diff.* Complete ST vs. baseline (4)	*Norm.Diff.* Complete MT vs. baseline (5)	*Diff=0 (p-value)* Complete ST vs. baseline (6)	*Diff=0 (p-value)* Complete MT vs. baseline (7)
Panel A: Outcomes							
Baseline index	-0.029	0.091	0.124	0.164	0.209	0.000	0.000
Father determines sex	0.268	0.281	0.320	0.020	0.081	0.511	0.009
Stricter control daugthers	0.556	0.491	0.464	-0.092	-0.131	0.003	0.000
Women should be virgin	0.742	0.720	0.706	-0.036	-0.056	0.281	0.088
Justify beating if unfaith	0.370	0.294	0.266	-0.115	-0.160	0.000	0.000
Women wear whatever	0.952	0.965	0.956	0.048	0.013	0.103	0.665
Ban kitchen during period	0.382	0.298	0.305	-0.126	-0.116	0.000	0.000
Tell anyone if friend beat	0.854	0.895	0.916	0.088	0.138	0.004	0.000
Climate change is a threat	0.598	0.670	0.696	0.105	0.146	0.000	0.000
Work in the future	0.720	0.744	0.721	0.038	0.000	0.212	0.998
Panel B: Controls							
Age (years)	20.939	20.969	20.889	0.011	-0.018	0.725	0.547
English self-assess (0-10)	5.449	5.576	5.667	0.029	0.050	0.338	0.092
Survey in english	0.372	0.368	0.449	-0.006	0.111	0.833	0.000
Female	0.240	0.272	0.275	0.052	0.056	0.097	0.073
Primary	0.073	0.069	0.050	-0.010	-0.067	0.754	0.019
Secondary	0.437	0.413	0.425	-0.036	-0.018	0.246	0.557
University	0.462	0.492	0.498	0.042	0.050	0.177	0.102
HH-head primary	0.186	0.208	0.183	0.039	-0.006	0.206	0.849
HH-head secondary	0.338	0.325	0.321	-0.020	-0.025	0.522	0.408
HH-head university	0.357	0.353	0.384	-0.005	0.041	0.869	0.182
Hindu	0.804	0.809	0.827	0.008	0.042	0.783	0.156
Muslim	0.134	0.149	0.116	0.029	-0.038	0.352	0.198
Christian	0.012	0.003	0.008	-0.068	-0.025	0.004	0.376
Sikh	0.031	0.023	0.024	-0.034	-0.029	0.238	0.318
General caste	0.534	0.526	0.564	-0.010	0.043	0.742	0.157
OBC caste	0.285	0.284	0.252	-0.001	-0.052	0.963	0.082
SC caste	0.133	0.152	0.152	0.039	0.039	0.214	0.209
Student	0.622	0.652	0.667	0.043	0.066	0.156	0.028
Employed	0.132	0.130	0.124	-0.004	-0.016	0.906	0.589
Self-employed	0.093	0.081	0.079	-0.031	-0.035	0.305	0.235
Live in Delhi	0.562	0.587	0.559	0.036	-0.005	0.237	0.882
Member of organization	0.180	0.135	0.155	-0.087	-0.047	0.003	0.112
Currently dating	0.334	0.333	0.309	-0.000	-0.038	0.988	0.208
Married	0.065	0.061	0.050	-0.011	-0.045	0.724	0.125
With sisters	0.675	0.733	0.709	0.090	0.053	0.003	0.078
Daily freq. social media	15.558	15.917	15.845	0.023	0.018	0.486	0.578
Daily freq. watch videos	2.288	2.389	2.388	0.067	0.066	0.023	0.026
Male friend beating	0.146	0.140	0.157	-0.012	0.021	0.691	0.503
Female friend beated	0.146	0.155	0.158	0.019	0.025	0.542	0.415

Notes: Table shows sample means at baseline for different categories of respondents: those who only completed baseline, those who completed the short-term survey and those who completed the medium-term survey.

Table A2: Balance of baseline outcomes and covariates for those completing the short-term survey

	Mean Drama N=258	*Mean* Document. N=128	*Mean* Control N=220	*Norm.Diff.* Drama vs.Control	*Norm.Diff.* Document. vs.Control	*Diff=0 (p-value)* Drama vs.Control	*Diff=0 (p-value)* Document. vs.Control
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Panel A: Outcomes							
Baseline index	0.130	0.085	0.049	0.110	0.049	0.091	0.534
Father determines sex	0.267	0.312	0.277	-0.016	0.054	0.810	0.490
Stricter control daugthers	0.439	0.520	0.533	-0.134	-0.018	0.044	0.822
Women should be virgin	0.689	0.728	0.751	-0.099	-0.037	0.153	0.657
Justify beating if unfaith	0.286	0.306	0.296	-0.015	0.017	0.821	0.836
Women wear whatever	0.976	0.959	0.956	0.076	0.011	0.260	0.894
Ban kitchen during period	0.284	0.291	0.318	-0.053	-0.043	0.435	0.603
Tell anyone if friend beat	0.866	0.913	0.917	-0.115	-0.010	0.087	0.902
Climate change is a threat	0.663	0.641	0.695	-0.049	-0.082	0.446	0.299
Work in the future	0.752	0.750	0.732	0.032	0.029	0.618	0.709
Panel B: Controls							
Age (years)	20.938	21.062	20.950	-0.004	0.040	0.946	0.616
English self-assess (0-10)	5.651	5.656	5.441	0.049	0.049	0.452	0.532
Survey in english	0.399	0.352	0.341	0.085	0.016	0.188	0.841
Female	0.287	0.258	0.264	0.037	-0.009	0.572	0.905
Primary	0.062	0.102	0.059	0.009	0.110	0.894	0.174
Secondary	0.368	0.422	0.459	-0.131	-0.053	0.045	0.501
University	0.535	0.453	0.464	0.101	-0.015	0.121	0.850
HH-head primary	0.209	0.250	0.182	0.049	0.117	0.450	0.143
HH-head secondary	0.318	0.289	0.355	-0.055	-0.099	0.399	0.205
HH-head university	0.372	0.367	0.323	0.073	0.066	0.259	0.403
Hindu	0.810	0.797	0.814	-0.006	-0.030	0.921	0.706
Muslim	0.147	0.148	0.150	-0.005	-0.003	0.934	0.969
Christian	0.000	0.000	0.009	-0.096	-0.096	0.157	0.158
Sikh	0.016	0.047	0.018	-0.015	0.114	0.822	0.169
General caste	0.531	0.570	0.495	0.050	0.106	0.439	0.177
OBC caste	0.271	0.273	0.305	-0.052	-0.048	0.426	0.537
SC caste	0.171	0.125	0.145	0.049	-0.042	0.453	0.589
Student	0.612	0.727	0.655	-0.062	0.110	0.341	0.158
Employed	0.159	0.102	0.114	0.093	-0.027	0.149	0.725
Self-employed	0.078	0.062	0.095	-0.045	-0.086	0.490	0.261
Live in Delhi	0.593	0.602	0.573	0.029	0.041	0.655	0.599
Member of organization	0.136	0.117	0.145	-0.020	-0.059	0.760	0.447
Currently dating	0.357	0.344	0.300	0.085	0.066	0.189	0.403
Married	0.070	0.039	0.064	0.017	-0.079	0.789	0.303
With sisters	0.756	0.734	0.705	0.082	0.047	0.210	0.550
Daily freq. social media	16.426	14.747	15.975	0.029	-0.079	0.675	0.354
Daily freq. watch videos	2.356	2.275	2.493	-0.097	-0.151	0.137	0.058
Male friend beating	0.163	0.133	0.118	0.091	0.031	0.160	0.694
Female friend beated	0.147	0.133	0.177	-0.057	-0.087	0.378	0.263

Notes: Table shows sample means at baseline for respondents who completed the short-term survey. The normalized difference in columns 4 and 5 is the difference in the sample means of treatment and control groups divided by the square root of the sum of the sample variances.

Table A3: Balance of baseline outcomes and covariates for those completing the medium-term survey

	Mean Drama N=212	*Mean* Document. N=200	*Mean* Control N=207	*Norm.Diff.* Drama vs.Control	*Norm.Diff.* Document. vs.Control	*Diff=0 (p-value)* Drama vs.Control	*Diff=0 (p-value)* Document. vs.Control
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Panel A: Outcomes							
Baseline index	0.161	0.076	0.131	0.040	-0.075	0.562	0.287
Father determines sex	0.316	0.335	0.309	0.010	0.039	0.880	0.578
Stricter control daugthers	0.423	0.513	0.457	-0.048	0.079	0.496	0.269
Women should be virgin	0.715	0.724	0.681	0.052	0.066	0.477	0.374
Justify beating if unfaith	0.250	0.286	0.262	-0.019	0.039	0.792	0.593
Women wear whatever	0.980	0.941	0.944	0.137	-0.007	0.055	0.920
Ban kitchen during period	0.273	0.305	0.337	-0.098	-0.049	0.178	0.512
Tell anyone if friend beat	0.918	0.879	0.948	-0.085	-0.174	0.249	0.021
Climate change is a threat	0.670	0.700	0.720	-0.077	-0.031	0.267	0.661
Work in the future	0.708	0.750	0.705	0.003	0.071	0.960	0.312
Panel B: Controls							
Age (years)	20.816	20.960	20.894	-0.029	0.024	0.680	0.731
English self-assess (0-10)	5.552	5.775	5.681	-0.030	0.022	0.663	0.754
Survey in english	0.443	0.505	0.401	0.061	0.148	0.380	0.035
Female	0.264	0.265	0.295	-0.048	-0.047	0.487	0.506
Primary	0.042	0.065	0.043	-0.004	0.067	0.959	0.340
Secondary	0.382	0.415	0.478	-0.138	-0.090	0.047	0.200
University	0.542	0.500	0.449	0.132	0.072	0.057	0.307
HH-head primary	0.208	0.160	0.179	0.052	-0.035	0.456	0.615
HH-head secondary	0.354	0.315	0.295	0.089	0.031	0.197	0.657
HH-head university	0.344	0.420	0.391	-0.069	0.041	0.320	0.557
Hindu	0.844	0.810	0.826	0.035	-0.029	0.616	0.675
Muslim	0.099	0.120	0.130	-0.070	-0.022	0.315	0.751
Christian	0.014	0.005	0.005	0.068	0.002	0.325	0.981
Sikh	0.014	0.045	0.014	-0.002	0.127	0.977	0.072
General caste	0.557	0.595	0.541	0.022	0.077	0.750	0.273
OBC caste	0.269	0.235	0.251	0.028	-0.027	0.681	0.704
SC caste	0.151	0.135	0.169	-0.035	-0.067	0.614	0.339
Student	0.651	0.720	0.633	0.027	0.132	0.700	0.060
Employed	0.137	0.120	0.116	0.044	0.009	0.522	0.899
Self-employed	0.113	0.045	0.077	0.086	-0.095	0.211	0.174
Live in Delhi	0.571	0.530	0.575	-0.006	-0.064	0.932	0.364
Member of organization	0.160	0.170	0.135	0.050	0.068	0.470	0.332
Currently dating	0.307	0.275	0.343	-0.055	-0.104	0.428	0.138
Married	0.042	0.050	0.058	-0.050	-0.025	0.469	0.723
With sisters	0.703	0.740	0.686	0.026	0.084	0.709	0.229
Daily freq. social media	15.924	14.896	16.721	-0.050	-0.113	0.492	0.126
Daily freq. watch videos	2.368	2.296	2.496	-0.089	-0.138	0.200	0.050
Male friend beating	0.160	0.205	0.106	0.113	0.194	0.104	0.006
Female friend beated	0.132	0.210	0.135	-0.007	0.140	0.924	0.047

Notes: Table shows sample means at baseline for respondents who completed the medium-term survey. The normalized difference in columns 4 and 5 is the difference in the sample means of treatment and control groups divided by the square root of the sum of the sample variances.

Table A4: Balance of baseline outcomes and covariates for those who completed baseline survey

	Mean Drama N=1791	*Mean* Document. N=1783	*Mean* Control N=1655	*Norm.Diff.* Drama vs.Control	*Norm.Diff.* Document. vs.Control	*Diff=0 (p-value)* Drama vs.Control	*Diff=0 (p-value)* Document. vs.Control
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Panel A: Outcomes							
Baseline index	0.002	-0.007	-0.008	0.014	0.002	0.552	0.942
Father determines sex	0.266	0.278	0.280	-0.022	-0.004	0.356	0.858
Stricter control daugthers	0.543	0.544	0.540	0.004	0.005	0.873	0.832
Women should be virgin	0.730	0.727	0.758	-0.045	-0.050	0.081	0.053
Justify beating if unfaith	0.356	0.362	0.346	0.015	0.025	0.548	0.325
Women wear whatever	0.950	0.956	0.955	-0.017	0.007	0.507	0.792
Ban kitchen during period	0.359	0.371	0.370	-0.016	0.001	0.528	0.965
Tell anyone if friend beat	0.859	0.856	0.870	-0.023	-0.028	0.380	0.272
Climate change is a threat	0.602	0.609	0.627	-0.035	-0.025	0.146	0.291
Work in the future	0.706	0.744	0.716	-0.015	0.044	0.530	0.068
Panel B: Controls							
Age (years)	20.915	20.980	20.915	-0.000	0.024	0.997	0.327
English self-assess (0-10)	5.496	5.478	5.468	0.006	0.002	0.792	0.925
Survey in english	0.366	0.397	0.379	-0.018	0.026	0.446	0.273
Female	0.242	0.246	0.248	-0.009	-0.002	0.712	0.918
Primary	0.067	0.079	0.067	-0.000	0.031	0.994	0.196
Secondary	0.430	0.421	0.451	-0.031	-0.044	0.206	0.070
University	0.477	0.472	0.454	0.033	0.026	0.165	0.278
HH-head primary	0.188	0.189	0.178	0.019	0.021	0.425	0.389
HH-head secondary	0.332	0.337	0.341	-0.013	-0.006	0.595	0.791
HH-head university	0.374	0.348	0.358	0.024	-0.015	0.318	0.541
Hindu	0.813	0.794	0.811	0.003	-0.031	0.912	0.202
Muslim	0.132	0.144	0.126	0.014	0.037	0.561	0.124
Christian	0.013	0.009	0.011	0.013	-0.014	0.594	0.575
Sikh	0.025	0.033	0.030	-0.024	0.012	0.312	0.630
General caste	0.529	0.546	0.535	-0.009	0.015	0.723	0.543
OBC caste	0.290	0.278	0.275	0.023	0.005	0.333	0.831
SC caste	0.135	0.123	0.146	-0.021	-0.046	0.376	0.057
Student	0.611	0.646	0.627	-0.023	0.028	0.342	0.249
Employed	0.130	0.125	0.140	-0.021	-0.032	0.387	0.192
Self-employed	0.106	0.085	0.083	0.056	0.005	0.019	0.840
Live in Delhi	0.555	0.581	0.554	0.001	0.038	0.957	0.111
Member of organization	0.175	0.178	0.168	0.014	0.019	0.568	0.422
Currently dating	0.332	0.333	0.331	0.001	0.003	0.973	0.900
Married	0.068	0.063	0.062	0.019	0.003	0.440	0.886
With sisters	0.685	0.698	0.663	0.034	0.054	0.164	0.026
Daily freq. social media	15.576	15.382	15.943	-0.022	-0.034	0.400	0.198
Daily freq. watch videos	2.314	2.283	2.318	-0.003	-0.022	0.914	0.355
Male friend beating	0.142	0.158	0.143	-0.000	0.030	0.985	0.218
Female friend beated	0.136	0.149	0.161	-0.051	-0.025	0.035	0.304

Notes: Table shows sample means at baseline for respondents who completed (at least) the baseline survey. The normalized difference in columns 4 and 5 is the difference in the sample means of treatment and control groups divided by the square root of the sum of the sample variances.

Table A5: Short-term impact on knowledge and awareness

Dep. Var. (Y):	*Father determines sex*		*Know VAW incidence*		*Mention gender rituals*		*VAW is an issue in India*	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Drama	0.123***	0.117***	0.030	0.034	0.085**	0.073*	0.070*	0.050
	(0.036)	(0.036)	(0.045)	(0.046)	(0.043)	(0.044)	(0.039)	(0.037)
Documentary	-0.023	-0.026	0.037	0.034	-0.010	-0.012	0.076*	0.083*
	(0.038)	(0.040)	(0.055)	(0.055)	(0.050)	(0.052)	(0.046)	(0.046)
$Y_{baseline}$	0.620***	0.591***						
	(0.036)	(0.042)						
Controls		✓		✓		✓		✓
R-squared	0.346	0.356	−0.002	0.006	0.006	0.016	0.004	0.072
P-value equal coef.	0.000	0.001	0.894	0.994	0.059	0.101	0.882	0.446
Observations	606	606	606	606	606	606	606	606
Mean Y (Control)								

Notes: Heteroscedasticity-robust standard errors in parentheses. Controls are described in the notes to Table 2. * p < 0.10, ** p < 0.05, *** p < 0.01

Table A6: Short-term impact on attitudes towards gender roles

Dep. Var. (Y):	*Stricter control daughters*		*Women takes rights away*		*Important boys to school*		*Men should participate*	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Drama	-0.034	-0.028	0.013	0.006	-0.025	-0.021	0.023	0.022
	(0.041)	(0.041)	(0.048)	(0.045)	(0.042)	(0.038)	(0.032)	(0.033)
Documentary	-0.024	-0.023	0.001	0.006	-0.051	-0.072	0.062*	0.057
	(0.049)	(0.048)	(0.058)	(0.056)	(0.050)	(0.046)	(0.035)	(0.035)
$Y_{baseline}$	0.429***	0.256***						
	(0.036)	(0.049)						
Controls		✓		✓		✓		✓
R-squared	0.203	0.245	−0.004	0.144	−0.002	0.192	0.001	0.045
P-value equal coef.	0.826	0.911	0.839	0.993	0.586	0.248	0.235	0.296
Observations	567	567	542	542	585	585	572	572
Mean Y (Control)	0.377	0.377	0.586	0.586	0.297	0.297	0.858	0.858

Notes: Heteroscedasticity-robust standard errors in parentheses. Controls are described in the notes to Table 2. * p < 0.10, ** p < 0.05, *** p < 0.01

Table A7: Short-term impact on attitudes towards gender norms

Dep. Var. (Y):	*Wrong to follow norms*		*Women virgin at marriage*		*Ban kitchen during period*		*Wear whatever they want*	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Drama	0.081*	0.072*	-0.086**	-0.070*	-0.091**	-0.083**	0.076***	0.060**
	(0.045)	(0.043)	(0.040)	(0.040)	(0.040)	(0.039)	(0.029)	(0.028)
Documentary	-0.024	-0.033	-0.059	-0.055	-0.030	-0.022	0.084***	0.068**
	(0.056)	(0.054)	(0.048)	(0.048)	(0.050)	(0.050)	(0.031)	(0.031)
$Y_{baseline}$			0.536***	0.434***	0.452***	0.337***	0.155	0.182*
			(0.042)	(0.052)	(0.044)	(0.053)	(0.101)	(0.100)
Controls		✓		✓		✓		✓
R-squared	0.005	0.109	0.280	0.288	0.206	0.270	0.024	0.060
P-value equal coef.	0.052	0.047	0.569	0.753	0.202	0.199	0.732	0.777
Observations	606	606	509	509	531	531	546	546
Mean Y (Control)	0.532	0.532	0.744	0.744	0.347	0.347	0.867	0.867

Notes: Heteroscedasticity-robust standard errors in parentheses. Controls are described in the notes to Table 2. * p < 0.10, ** p < 0.05, *** p < 0.01

Table A8: Short-term impact on attitudes towards VAW

Dep. Var. (Y):	*Justify beating if goes out*		*Justify beating if unfaith*		*Tell anyone if friend beaten*	
	(1)	(2)	(3)	(4)	(5)	(6)
Drama	-0.075*	-0.075**	-0.032	-0.033	0.090***	0.092***
	(0.041)	(0.038)	(0.041)	(0.040)	(0.033)	(0.033)
Documentary	-0.050	-0.041	-0.003	-0.004	0.052	0.045
	(0.050)	(0.048)	(0.050)	(0.051)	(0.040)	(0.040)
$Y_{baseline}$			0.407***	0.273***	0.445***	0.391***
			(0.044)	(0.054)	(0.068)	(0.069)
Controls		✓		✓		✓
R-squared	0.003	0.132	0.159	0.216	0.152	0.207
P-value equal coef.	0.586	0.462	0.537	0.553	0.293	0.202
Observations	568	568	542	542	522	522
Mean Y (Control)	0.277	0.277	0.318	0.318	0.815	0.815

Notes: Heteroscedasticity-robust standard errors in parentheses. Controls are described in the notes to Table 2. * p < 0.10, ** p < 0.05, *** p < 0.01

Table A9: Short-term impact on beliefs about Facebook friends

Dep. Var. (Y):	*Others: women virginity*		*Others: men virginity*		*Others: beat unfaith*		*Others: beat goes out*	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Drama	0.164	0.224	0.464	0.490	0.353	0.434	-0.035	0.074
	(0.271)	(0.276)	(0.302)	(0.302)	(0.288)	(0.289)	(0.321)	(0.319)
Documentary	0.385	0.510	0.959***	1.079***	1.056***	1.270***	0.586	0.831**
	(0.329)	(0.324)	(0.367)	(0.357)	(0.356)	(0.349)	(0.398)	(0.379)
$Y_{baseline}$	0.413***	0.401***			0.393***	0.373***		
	(0.038)	(0.039)			(0.039)	(0.042)		
Controls		✓		✓		✓		✓
R-squared	0.178	0.211	0.008	0.060	0.167	0.196	0.002	0.073
P-value equal coef.	0.500	0.373	0.184	0.103	0.049	0.019	0.113	0.044
Observations	605	605	605	605	598	598	605	605
Mean Y (Control)	4.731	4.731	3.877	3.877	3.512	3.512	3.461	3.461

Notes: Heteroscedasticity-robust standard errors in parentheses. Controls are described in the notes to Table 2. * p < 0.10, ** p < 0.05, *** p < 0.01

Table A10: Medium-term impacts on knowledge and awareness

Dep. Var. (Y):	*Father determines sex*		*Know VAW incidence*		*Mention gender rituals*		*VAW is an issue in India*	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Drama	0.074*	0.066	-0.053	-0.068	-0.027	-0.036	-0.000	-0.008
	(0.042)	(0.043)	(0.048)	(0.050)	(0.046)	(0.047)	(0.038)	(0.037)
Documentary	0.038	0.017	-0.046	-0.063	-0.025	-0.030	0.065*	0.078**
	(0.042)	(0.043)	(0.049)	(0.050)	(0.046)	(0.047)	(0.035)	(0.035)
$Y_{baseline}$	0.493***	0.447***						
	(0.038)	(0.044)						
Controls		✓		✓		✓		✓
R-squared	0.223	0.242	−0.001	0.024	−0.003	0.023	0.004	0.062
P-value equal coef.	0.419	0.267	0.887	0.920	0.966	0.896	0.062	0.016
Observations	617	617	617	617	617	617	617	617
Mean Y (Control)								

Notes: Heteroscedasticity-robust standard errors in parentheses. Controls are described in the notes to Table 2. * p < 0.10, ** p < 0.05, *** p < 0.01

Table A11: Medium-term impacts on attitudes towards gender norms and gender roles

Dep. Var. (Y):	*Women virgin at marriage*		*Ban kitchen during period*		*Wear whatever they want*		*Important boys to school*	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Drama	-0.101*	-0.041	-0.112**	-0.126***	0.006	-0.011	-0.071	-0.073*
	(0.052)	(0.046)	(0.044)	(0.045)	(0.019)	(0.019)	(0.044)	(0.042)
Documentary	-0.050	-0.025	-0.049	-0.063	0.020	0.016	-0.075*	-0.088**
	(0.052)	(0.047)	(0.047)	(0.046)	(0.019)	(0.019)	(0.044)	(0.043)
$Y_{baseline}$	0.423***	0.139***	0.443***	0.348***	0.164**	0.127*		
	(0.041)	(0.047)	(0.044)	(0.054)	(0.077)	(0.072)		
Controls		✓		✓		✓		✓
R-squared	0.136	0.355	0.193	0.236	0.030	0.062	0.003	0.122
P-value equal coef.	0.341	0.753	0.160	0.169	0.420	0.146	0.927	0.736
Observations	461	461	532	532	578	578	597	597
Mean Y (Control)	0.471	0.471	0.401	0.401	0.953	0.953	0.296	0.296

Notes: Heteroscedasticity-robust standard errors in parentheses. Controls are described in the notes to Table 2. * p < 0.10, ** p < 0.05, *** p < 0.01

Table A12: Medium-term impacts on attitudes towards VAW

Dep. Var. (Y):	*Justify beating if goes out*		*Justify beating if unfaith*		*Justify beating if neglect*		*Justify beating if disrespect*	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Drama	0.026	0.025	-0.032	-0.041	-0.029	-0.044	0.014	0.010
	(0.041)	(0.039)	(0.046)	(0.047)	(0.049)	(0.046)	(0.050)	(0.047)
Documentary	0.004	-0.004	0.001	0.002	0.039	0.032	0.013	-0.002
	(0.041)	(0.040)	(0.047)	(0.047)	(0.050)	(0.048)	(0.051)	(0.050)
$Y_{baseline}$			0.292***	0.154***				
			(0.047)	(0.057)				
Controls		✓		✓		✓		✓
R-squared	−0.003	0.092	0.075	0.118	−0.000	0.148	−0.003	0.125
P-value equal coef.	0.598	0.477	0.486	0.361	0.168	0.110	0.984	0.806
Observations	599	599	543	543	589	589	578	578
Mean Y (Control)	0.200	0.200	0.317	0.317	0.400	0.400	0.432	0.432

Notes: Heteroscedasticity-robust standard errors in parentheses. Controls are described in the notes to Table 2. * p < 0.10, ** p < 0.05, *** p < 0.01

Table A13: Medium-term impacts on beliefs about Facebook friends

Dep. Var. (Y):	*Others: women virginity*		*Others: beat unfaith*		*Others: beat goes out*	
	(1)	(2)	(3)	(4)	(5)	(6)
Drama	-0.531*	-0.478	-0.078	0.027	-0.217	-0.095
	(0.299)	(0.302)	(0.309)	(0.313)	(0.321)	(0.322)
Documentary	-0.219	-0.105	0.003	-0.046	-0.473	-0.503
	(0.298)	(0.295)	(0.309)	(0.313)	(0.319)	(0.311)
$Y_{baseline}$	0.349***	0.327***	0.325***	0.293***		
	(0.040)	(0.041)	(0.040)	(0.042)		
Controls		✓		✓		✓
R-squared	0.124	0.151	0.117	0.138	0.000	0.064
P-value equal coef.	0.290	0.212	0.792	0.816	0.421	0.201
Observations	616	616	615	615	619	619
Mean Y (Control)	5.000	5.000	3.546	3.546	3.208	3.208

Notes: Heteroscedasticity-robust standard errors in parentheses. Controls are described in the notes to Table 2. * p < 0.10, ** p < 0.05, *** p < 0.01

Table A14: Medium-term impacts on clicks on informative links

Dep. Var. (Y):	*Click gender-links*		*Click climate-links*		*Duration gender-link*		*Duration climate-link*	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	ITT	ToT	ITT	ToT	ITT	ToT	ITT	ToT
Drama	-0.002		0.010		-1.059		-1.846*	
	(0.017)		(0.014)		(1.206)		(1.028)	
Documentary	-0.018		0.000		-0.967		-0.732	
	(0.015)		(0.013)		(1.174)		(1.373)	
Play Drama		-0.003		0.013		-1.407		-2.411*
		(0.022)		(0.018)		(1.563)		(1.316)
Play Documentary		-0.036		0.000		-2.005		-1.420
		(0.031)		(0.026)		(2.382)		(2.643)
Controls	✓	✓	✓	✓	✓	✓	✓	✓
R-squared	−0.001	−0.007	−0.001	−0.003	−0.022	−0.031	0.015	0.003
P-value equal coef.	0.298	0.197	0.544	0.637	0.889	0.660	0.199	0.588
Observations	619	619	619	619	589	589	584	584
Wald F-statistic		116.9		116.9		107.1		112.8
Mean Y (Control)	0.029	0.029	0.014	0.014	1.612	1.612	2.269	2.269

Notes: Heteroscedasticity-robust standard errors in parentheses. In columns (1)-(2), the dependent variable takes value 1 if the respondent clicked on both gender links (PFI and UN women India). In columns (3)-(4), the dependent variable takes value 1 if the respondent clicked on both climate links (Delhi Green and UN environment program India). Visit duration is measured in seconds, and it refers to the PFI website in columns (5)-(6) and to the Delhi Green website in columns (7)-(8). Controls are described in the notes to Table 2. Independent variables Play Drama and Play Documentary take value 1 if the respondent has played half or more of the assigned video clips, as objectively recorded by the bot. These variables are instrumented using the random assignment indicators to the treatment groups. The first-stage Wald F-statistic is reported. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A15: Short-term impacts on outcome indexes constructed using principal component

Panel A: ITT estimates

Dep. Var. (Y):	*Global index*		*Knowledge*		*Gender norms/roles*		*VAW attitudes*		*Beliefs others' attit.*	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Drama	0.735***	0.555***	0.386***	0.325**	0.577***	0.423***	0.314**	0.246*	-0.177	-0.236
	(0.223)	(0.152)	(0.135)	(0.128)	(0.187)	(0.139)	(0.154)	(0.127)	(0.172)	(0.172)
Documentary	0.337	0.240	0.164	0.152	0.200	0.113	0.229	0.187	-0.486**	-0.617***
	(0.265)	(0.172)	(0.154)	(0.148)	(0.231)	(0.161)	(0.176)	(0.148)	(0.214)	(0.201)
Controls		✓		✓		✓		✓		✓
R-squared	0.015	0.573	0.011	0.124	0.013	0.502	0.004	0.342	0.005	0.086
P-value equal coef.	0.112	0.060	0.112	0.205	0.081	0.046	0.615	0.682	0.150	0.060
Observations	606	606	606	606	606	606	606	606	606	606
Mean Y (Control)	-0.238	-0.238	-0.068	-0.068	-0.188	-0.188	-0.123	-0.123	0.212	0.212
SD Y (Control)	2.516	2.516	1.574	1.574	2.141	2.141	1.682	1.682	1.810	1.810

Panel B: ToT estimates

Dep. Var. (Y):	*Global index*		*Knowledge*		*Gender norms/roles*		*VAW attitudes*		*Beliefs others' attit.*	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Play Drama	0.908***	0.693***	0.476***	0.406***	0.712***	0.528***	0.388**	0.308**	-0.219	-0.302
	(0.272)	(0.185)	(0.166)	(0.156)	(0.229)	(0.169)	(0.189)	(0.155)	(0.213)	(0.211)
Play Documentary	0.496	0.365	0.241	0.231	0.294	0.174	0.336	0.282	-0.714**	-0.925***
	(0.386)	(0.249)	(0.226)	(0.216)	(0.336)	(0.234)	(0.257)	(0.216)	(0.326)	(0.309)
Controls		✓		✓		✓		✓		✓
R-squared	0.036	0.579	0.013	0.122	0.031	0.506	0.017	0.345	—0.025	0.049
P-value equal coef.	0.233	0.146	0.227	0.351	0.162	0.093	0.827	0.894	0.113	0.033
Observations	606	606	606	606	606	606	606	606	606	606
Wald F-statistic	265.5	231.3	265.5	231.3	265.5	231.3	265.5	231.3	265.5	231.3
Mean Y (Control)	-0.238	-0.238	-0.068	-0.068	-0.188	-0.188	-0.123	-0.123	0.212	0.212
SD Y (Control)	2.516	2.516	1.574	1.574	2.141	2.141	1.682	1.682	1.810	1.810

Notes: Heteroscedasticity-robust standard errors in parentheses. The Global index is composed by indexes for individuals' knowledge, gender norms/roles and VAW attitudes; excluding individuals beliefs on others' attitudes. Higher values of the indexes in (1) to (8) stand for more progressive stances. The index "Beliefs on others' attitudes" reported in (9) and (10) takes higher values when the respondents believe that a larger share (out of 10) of their closest Facebook friends have progressive attitudes. Controls are described in the notes to Table 2. In Panel B, independent variables Play Drama and Play Documentary take value 1 if the respondent has played half or more of the assigned video clips, as objectively recorded by the bot. These variables are instrumented using the random assignment indicators to the treatment groups. The first-stage Wald F-statistic is reported. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A16: Medium-term impacts on outcome indexes constructed using principal component

Dep. Var. (Y):	*Global index*		*Knowledge*		*Gender norms/roles*		*VAW attitudes*		*Beliefs others' attit.*	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	ITT	ToT	ITT	ToT	ITT	ToT	ITT	ToT	ITT	ToT
Drama	0.249		-0.039		0.287**		0.075		0.064	
	(0.165)		(0.121)		(0.131)		(0.154)		(0.155)	
Documentary	0.160		0.095		0.199		-0.014		0.176	
	(0.167)		(0.117)		(0.127)		(0.169)		(0.149)	
Play Drama		0.330		-0.051		0.381**		0.099		0.085
		(0.212)		(0.156)		(0.168)		(0.199)		(0.201)
Play Documentary		0.325		0.194		0.405		-0.030		0.358
		(0.332)		(0.232)		(0.251)		(0.337)		(0.294)
Controls	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
R-squared	0.504	0.510	0.138	0.139	0.495	0.504	0.278	0.278	0.073	0.078
P-value equal coef.	0.599	0.986	0.281	0.248	0.496	0.913	0.592	0.667	0.463	0.294
Observations	619	619	619	619	619	619	619	619	619	619
Wald F-stat		116.9		116.9		116.9		116.9		116.9
Mean Y (Control)	-0.114	-0.114	0.014	0.014	-0.094	-0.094	-0.061	-0.061	-0.080	-0.080
SD Y (Control)	2.447	2.447	1.248	1.248	1.901	1.901	1.925	1.925	1.570	1.570

Notes: Heteroscedasticity-robust standard errors in parentheses. The Global index is composed by indexes for individuals' knowledge, gender norms/roles and VAW attitudes; excluding individuals beliefs on others' attitudes. Higher values of the indexes in (1) to (8) stand for more progressive stances. The index "Beliefs on others' attitudes" reported in (9) and (10) takes higher values when the respondents believe that a larger share (out of 10) of their closest Facebook friends have progressive attitudes. Controls are described in the notes to Table 2. Independent variables Play Drama and Play Documentary take value 1 if the respondent has played half or more of the assigned video clips, as objectively recorded by the bot. These variables are instrumented using the random assignment indicators to the treatment groups. The first-stage Wald F-statistic is reported. * p < 0.10, ** p < 0.05, *** p < 0.01

Table A17: Short-term heterogeneous impacts by gender

Dep. Var. (Y):	*Global index*	*Knowledge*	*Gender norm-s/roles*	*VAW attitudes*	*Beliefs others' attit.*	*Click gender-links*	*Willing to share video*
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Drama	0.140***	0.123	0.129**	0.198**	-0.088	0.116***	-0.003
	(0.043)	(0.076)	(0.053)	(0.089)	(0.100)	(0.034)	(0.027)
Documentary	0.093**	0.047	0.088	0.169	-0.312***	0.141***	0.061**
	(0.044)	(0.086)	(0.055)	(0.105)	(0.119)	(0.044)	(0.031)
Drama * Female	0.011	0.166	0.002	-0.166	-0.106	-0.161**	-0.098*
	(0.067)	(0.142)	(0.084)	(0.147)	(0.195)	(0.074)	(0.056)
Documentary * Female	-0.096	0.065	-0.131	-0.195	0.020	-0.161*	-0.051
	(0.083)	(0.164)	(0.104)	(0.177)	(0.233)	(0.091)	(0.065)
Female	0.139***	-0.067	0.152**	0.368***	-0.104	0.119**	-0.045
	(0.053)	(0.114)	(0.067)	(0.118)	(0.144)	(0.057)	(0.042)
R-squared	0.585	0.121	0.515	0.338	0.083	0.028	0.034
Observations	606	606	606	606	606	606	2269

Notes: Notes: Heteroscedasticity-robust standard errors in parentheses. The Global index is composed by indexes for individuals' knowledge, gender norms/roles and VAW attitudes; excluding individuals beliefs on others' attitudes. Higher values of the indexes in (1) to (4) stand for more progressive stances. The index "Beliefs on others' attitudes" reported in (5) takes higher values when the respondents believe that a larger share (out of 10) of their closest Facebook friends have progressive attitudes. Baseline controls described in the notes to Table 2 are included in all regressions. * p < 0.10, ** p < 0.05, *** p < 0.01

Table A18: Short-term heterogeneous impacts by age

Dep. Var. (Y):	*Global index*	*Knowledge*	*Gender norms/roles*	*VAW attitudes*	*Beliefs others' attit.*	*Click gender-links*	*Willing to share video*
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Drama	0.111***	0.152**	0.090*	0.128	-0.036	0.071**	0.002
	(0.040)	(0.077)	(0.047)	(0.085)	(0.100)	(0.035)	(0.028)
Documentary	0.053	0.044	0.039	0.115	-0.274**	0.061	0.047
	(0.045)	(0.085)	(0.055)	(0.100)	(0.115)	(0.044)	(0.032)
Drama * Below 20	0.115	0.056	0.146	0.093	-0.298	0.008	-0.094*
	(0.078)	(0.144)	(0.098)	(0.174)	(0.196)	(0.069)	(0.053)
Documentary * Below 20	0.059	0.078	0.060	0.033	-0.111	0.136	0.013
	(0.088)	(0.166)	(0.109)	(0.193)	(0.231)	(0.094)	(0.060)
Below 20	-0.082	-0.095	-0.057	-0.148	0.015	-0.030	0.012
	(0.070)	(0.130)	(0.087)	(0.160)	(0.168)	(0.056)	(0.048)
R-squared	0.585	0.118	0.515	0.336	0.087	0.022	0.034
Observations	606	606	606	606	606	606	2269

Notes: Notes: Heteroscedasticity-robust standard errors in parentheses. The Global index is composed by indexes for individuals' knowledge, gender norms/roles and VAW attitudes; excluding individuals beliefs on others' attitudes. Higher values of the indexes in (1) to (4) stand for more progressive stances. The index "Beliefs on others' attitudes" reported in (5) takes higher values when the respondents believe that a larger share (out of 10) of their closest Facebook friends have progressive attitudes. Baseline controls described in the notes to Table 2 are included in all regressions. * p < 0.10, ** p < 0.05, *** p < 0.01

Table A19: Short-term heterogeneous impacts by caste

Dep. Var. (Y):	*Global index*	*Knowledge*	*Gender norms/roles*	*VAW attitudes*	*Beliefs others' attit.*	*Click gender-links*	*Willing to share video*
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Drama	0.091**	0.091	0.094*	0.081	-0.133	0.106**	-0.009
	(0.046)	(0.088)	(0.054)	(0.099)	(0.110)	(0.043)	(0.032)
Documentary	0.039	0.050	0.002	0.150	-0.455***	0.095*	0.029
	(0.051)	(0.098)	(0.064)	(0.115)	(0.126)	(0.050)	(0.036)
Drama * Low Caste	0.119*	0.174	0.084	0.163	0.036	-0.073	-0.033
	(0.069)	(0.127)	(0.084)	(0.152)	(0.174)	(0.060)	(0.048)
Documentary * Low Caste	0.065	0.019	0.130	-0.088	0.358*	0.016	0.052
	(0.076)	(0.148)	(0.093)	(0.172)	(0.206)	(0.081)	(0.056)
Low Caste	-0.072	-0.075	-0.080	-0.038	-0.087	0.018	-0.000
	(0.052)	(0.100)	(0.065)	(0.113)	(0.126)	(0.041)	(0.036)
R-squared	0.586	0.124	0.515	0.339	0.087	0.023	0.034
Observations	606	606	606	606	606	606	2269

Notes: Heteroscedasticity-robust standard errors in parentheses. The Global index is composed by indexes for individuals' knowledge, gender norms/roles and VAW attitudes; excluding individuals beliefs on others' attitudes. Higher values of the indexes in (1) to (4) stand for more progressive stances. The index "Beliefs on others' attitudes" reported in (5) takes higher values when the respondents believe that a larger share (out of 10) of their closest Facebook friends have progressive attitudes. Baseline controls described in the notes to Table 2 are included in all regressions. * p < 0.10, ** p < 0.05, *** p < 0.01

Table A20: Short-term heterogeneous impacts by education

Dep. Var. (Y):	*Global index*	*Knowledge*	*Gender norm-s/roles*	*VAW attitudes*	*Beliefs others' attit.*	*Click gender-links*	*Willing to share video*
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Drama	0.129***	0.106	0.142**	0.118	-0.133	0.041	-0.017
	(0.049)	(0.097)	(0.061)	(0.109)	(0.128)	(0.044)	(0.033)
Documentary	0.079	0.028	0.073	0.167	-0.441***	0.156***	0.067*
	(0.054)	(0.102)	(0.067)	(0.127)	(0.147)	(0.059)	(0.037)
Drama * University	0.024	0.125	-0.026	0.060	0.044	0.066	-0.018
	(0.068)	(0.131)	(0.081)	(0.154)	(0.172)	(0.063)	(0.048)
Documentary * University	-0.031	0.071	-0.044	-0.126	0.305	-0.120	-0.038
	(0.078)	(0.146)	(0.096)	(0.172)	(0.207)	(0.078)	(0.055)
University	-0.019	-0.083	0.029	-0.093	-0.130	-0.047	0.002
	(0.050)	(0.102)	(0.062)	(0.114)	(0.123)	(0.038)	(0.037)
R-squared	0.584	0.122	0.515	0.336	0.087	0.029	0.033
Observations	606	606	606	606	606	606	2269

Notes: Heteroscedasticity-robust standard errors in parentheses. The Global index is composed by indexes for individuals' knowledge, gender norms/roles and VAW attitudes; excluding individuals beliefs on others' attitudes. Higher values of the indexes in (1) to (4) stand for more progressive stances. The index "Beliefs on others' attitudes" reported in (5) takes higher values when the respondents believe that a larger share (out of 10) of their closest Facebook friends have progressive attitudes. Baseline controls described in the notes to Table 2 are included in all regressions. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A21: Short-term heterogeneous impacts by education of household-head (HH)

Dep. Var. (Y):	*Global index*	*Knowledge*	*Gender norm-s/roles*	*VAW attitudes*	*Beliefs others' attit.*	*Click gender-links*	*Willing to share video*
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Drama	0.184***	0.246***	0.154***	0.203**	-0.132	0.068*	-0.030
	(0.042)	(0.078)	(0.051)	(0.095)	(0.108)	(0.036)	(0.030)
Documentary	0.081*	0.082	0.037	0.229**	-0.488***	0.096**	0.074**
	(0.048)	(0.090)	(0.059)	(0.112)	(0.129)	(0.047)	(0.034)
Drama * HH university	-0.121*	-0.247*	-0.063	-0.149	0.056	0.010	0.014
	(0.071)	(0.137)	(0.089)	(0.145)	(0.172)	(0.068)	(0.050)
Documentary * HH university	-0.052	-0.095	0.045	-0.318*	0.498**	0.006	-0.067
	(0.081)	(0.154)	(0.102)	(0.171)	(0.199)	(0.087)	(0.057)
HH-university	0.084	0.195*	0.019	0.152	0.152	0.052	0.046
	(0.056)	(0.112)	(0.072)	(0.110)	(0.121)	(0.047)	(0.039)
R-squared	0.581	0.123	0.509	0.335	0.091	0.020	0.034
Observations	606	606	606	606	606	606	2269

Notes: Heteroscedasticity-robust standard errors in parentheses. The Global index is composed by indexes for individuals' knowledge, gender norms/roles and VAW attitudes; excluding individuals beliefs on others' attitudes. Higher values of the indexes in (1) to (4) stand for more progressive stances. The index "Beliefs on others' attitudes" reported in (5) takes higher values when the respondents believe that a larger share (out of 10) of their closest Facebook friends have progressive attitudes. Baseline controls described in the notes to Table 2 are included in all regressions. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A22: Short-term heterogeneous impacts by perceptions of social norms (SN)

Dep. Var. (Y):	*Global index*	*Knowledge*	*Gender norm-s/roles*	*VAW attitudes*	*Beliefs others' attit.*	*Click gender-links*	*Willing to share video*
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Drama	0.192***	0.199**	0.150**	0.323***	-0.116	0.050	-0.007
	(0.049)	(0.092)	(0.060)	(0.101)	(0.107)	(0.045)	(0.034)
Documentary	0.130**	0.021	0.146**	0.225*	-0.353***	0.103*	0.019
	(0.053)	(0.098)	(0.065)	(0.115)	(0.120)	(0.056)	(0.039)
Drama * Strict SN perceptions	-0.094	-0.057	-0.038	-0.328**	0.025	0.044	-0.034
	(0.068)	(0.130)	(0.083)	(0.145)	(0.154)	(0.059)	(0.048)
Documentary * Strict SN perceptions	-0.134*	0.093	-0.201**	-0.212	0.017	-0.009	0.061
	(0.076)	(0.145)	(0.095)	(0.169)	(0.187)	(0.082)	(0.054)
Strict SN perceptions	0.038	-0.036	0.025	0.180	-0.771***	-0.015	0.035
	(0.050)	(0.102)	(0.061)	(0.111)	(0.112)	(0.041)	(0.035)
R-squared	0.586	0.120	0.517	0.341	0.233	0.018	0.035
Observations	606	606	606	606	606	606	2269

Notes: Heteroscedasticity-robust standard errors in parentheses. The Global index is composed by indexes for individuals' knowledge, gender norms/roles and VAW attitudes; excluding individuals beliefs on others' attitudes. Higher values of the indexes in (1) to (4) stand for more progressive stances. The index "Beliefs on others' attitudes" reported in (5) takes higher values when the respondents believe that a larger share (out of 10) of their closest Facebook friends have progressive attitudes. Baseline controls described in the notes to Table 2 are included in all regressions. * p < 0.10, ** p < 0.05, *** p < 0.01

Table A23: Short-term heterogeneous impacts by membership in a social organization

Dep. Var. (Y):	*Global index*	*Knowledge*	*Gender norm-s/roles*	*VAW attitudes*	*Beliefs others' attit.*	*Click gender-links*	*Willing to share video*
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Drama	0.111***	0.141**	0.088*	0.149*	-0.110	0.073**	-0.030
	(0.038)	(0.069)	(0.046)	(0.080)	(0.092)	(0.033)	(0.026)
Documentary	0.076*	0.065	0.048	0.182**	-0.286***	0.095**	0.039
	(0.041)	(0.080)	(0.051)	(0.091)	(0.107)	(0.041)	(0.030)
Drama * ORG member	0.230***	0.192	0.305***	0.035	-0.053	0.005	0.022
	(0.088)	(0.185)	(0.112)	(0.214)	(0.243)	(0.089)	(0.066)
Documentary * ORG member	-0.096	-0.040	0.016	-0.548**	-0.168	0.048	0.065
	(0.100)	(0.198)	(0.126)	(0.257)	(0.303)	(0.119)	(0.073)
ORG member	-0.082	-0.085	-0.131	0.087	0.071	-0.005	0.047
	(0.066)	(0.149)	(0.087)	(0.143)	(0.174)	(0.052)	(0.050)
R-squared	0.590	0.120	0.520	0.341	0.082	0.017	0.035
Observations	606	606	606	606	606	606	2269

Notes: Heteroscedasticity-robust standard errors in parentheses. The Global index is composed by indexes for individuals' knowledge, gender norms/roles and VAW attitudes; excluding individuals beliefs on others' attitudes. Higher values of the indexes in (1) to (4) stand for more progressive stances. The index "Beliefs on others' attitudes" reported in (5) takes higher values when the respondents believe that a larger share (out of 10) of their closest Facebook friends have progressive attitudes. Baseline controls described in the notes to Table 2 are included in all regressions. * p < 0.10, ** p < 0.05, *** p < 0.01

Table A24: Medium-term heterogeneous impacts by gender

Dep. Var. (Y):	*Global index*	*Knowledge*	*Gender norms/roles*	*VAW attitudes*	*Beliefs others' attit.*	*Intent to update picture*	*Actual picture update*
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Drama	0.099**	0.028	0.145***	0.064	0.097	0.100*	0.006
	(0.042)	(0.072)	(0.050)	(0.082)	(0.104)	(0.053)	(0.036)
Documentary	0.051	0.073	0.067	0.001	0.192*	0.113**	0.048
	(0.041)	(0.071)	(0.049)	(0.084)	(0.101)	(0.055)	(0.040)
Drama * Female	-0.188**	-0.209	-0.210**	-0.129	-0.193	-0.149	0.089
	(0.078)	(0.128)	(0.088)	(0.154)	(0.193)	(0.093)	(0.056)
Documentary * Female	-0.079	-0.164	-0.112	0.056	-0.343*	-0.140	0.090
	(0.076)	(0.129)	(0.086)	(0.162)	(0.179)	(0.098)	(0.067)
Female	0.181***	0.091	0.213***	0.189*	0.115	0.027	-0.095***
	(0.055)	(0.097)	(0.065)	(0.106)	(0.131)	(0.067)	(0.032)
R-squared	0.540	0.130	0.483	0.290	0.076	0.023	0.003
Observations	619	619	619	619	619	619	619

Notes: Heteroscedasticity-robust standard errors in parentheses. The Global index is composed by indexes for individuals' knowledge, gender norms/roles and VAW attitudes; excluding individuals beliefs on others' attitudes. Higher values of the indexes in (1) to (4) stand for more progressive stances. The index "Beliefs on others' attitudes" reported in (5) takes higher values when the respondents believe that a larger share (out of 10) of their closest Facebook friends have progressive attitudes. Baseline controls described in the notes to Table 2 are included in all regressions. * p < 0.10, ** p < 0.05, *** p < 0.01

Table A25: Medium-term heterogeneous impacts by age

Dep. Var. (Y):	*Global index*	*Knowledge*	*Gender norms/roles*	*VAW attitudes*	*Beliefs others' attit.*	*Intent to update picture*	*Actual picture update*
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Drama	0.040	-0.055	0.064	0.069	0.034	0.045	0.053
	(0.043)	(0.073)	(0.049)	(0.079)	(0.106)	(0.053)	(0.035)
Documentary	0.011	0.049	0.023	-0.045	0.052	0.082	0.081**
	(0.042)	(0.069)	(0.047)	(0.086)	(0.098)	(0.055)	(0.038)
Drama * Below 20	0.024	0.077	0.077	-0.125	0.044	0.048	-0.072
	(0.080)	(0.137)	(0.096)	(0.162)	(0.194)	(0.096)	(0.063)
Documentary * Below 20	0.064	-0.085	0.047	0.217	0.174	-0.027	-0.029
	(0.073)	(0.135)	(0.090)	(0.156)	(0.193)	(0.101)	(0.076)
Below 20	-0.058	0.003	-0.083	-0.056	-0.238	-0.064	-0.001
	(0.063)	(0.114)	(0.078)	(0.128)	(0.168)	(0.083)	(0.057)
R-squared	0.535	0.127	0.479	0.293	0.074	0.019	0.001
Observations	619	619	619	619	619	619	619

Notes: Heteroscedasticity-robust standard errors in parentheses. The Global index is composed by indexes for individuals' knowledge, gender norms/roles and VAW attitudes; excluding individuals beliefs on others' attitudes. Higher values of the indexes in (1) to (4) stand for more progressive stances. The index "Beliefs on others' attitudes" reported in (5) takes higher values when the respondents believe that a larger share (out of 10) of their closest Facebook friends have progressive attitudes. Baseline controls described in the notes to Table 2 are included in all regressions. * p < 0.10, ** p < 0.05, *** p < 0.01

Table A26: Medium-term heterogeneous impacts by caste

Dep. Var. (Y):	*Global index*	*Knowledge*	*Gender norms/roles*	*VAW attitudes*	*Beliefs others' attit.*	*Intent to update picture*	*Actual picture update*
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Drama	0.077*	0.003	0.124**	0.041	0.045	-0.012	0.006
	(0.045)	(0.079)	(0.051)	(0.084)	(0.116)	(0.056)	(0.034)
Documentary	0.043	0.028	0.069	0.003	0.076	0.063	0.064
	(0.043)	(0.080)	(0.049)	(0.090)	(0.107)	(0.058)	(0.040)
Drama * Low Caste	-0.071	-0.081	-0.090	-0.023	0.005	0.175*	0.065
	(0.073)	(0.120)	(0.085)	(0.145)	(0.174)	(0.089)	(0.062)
Documentary * Low Caste	-0.033	-0.001	-0.083	0.040	0.066	0.023	0.025
	(0.070)	(0.119)	(0.084)	(0.153)	(0.171)	(0.093)	(0.070)
Low Caste	-0.054	-0.058	-0.028	-0.101	-0.055	-0.005	0.021
	(0.051)	(0.085)	(0.063)	(0.103)	(0.124)	(0.062)	(0.041)
R-squared	0.534	0.127	0.479	0.287	0.067	0.023	0.000
Observations	619	619	619	619	619	619	619

Notes: Heteroscedasticity-robust standard errors in parentheses. The Global index is composed by indexes for individuals' knowledge, gender norms/roles and VAW attitudes; excluding individuals beliefs on others' attitudes. Higher values of the indexes in (1) to (4) stand for more progressive stances. The index "Beliefs on others' attitudes" reported in (5) takes higher values when the respondents believe that a larger share (out of 10) of their closest Facebook friends have progressive attitudes. Baseline controls described in the notes to Table 2 are included in all regressions. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A27: Medium-term heterogeneous impacts by education

Dep. Var. (Y):	*Global index*	*Knowledge*	*Gender norms/roles*	*VAW attitudes*	*Beliefs others' attit.*	*Intent to update picture*	*Actual picture update*
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Drama	0.072	0.024	0.111*	0.033	0.063	0.007	0.028
	(0.048)	(0.084)	(0.061)	(0.097)	(0.128)	(0.062)	(0.041)
Documentary	0.084*	0.097	0.058	0.125	0.135	0.053	0.087*
	(0.045)	(0.082)	(0.055)	(0.098)	(0.118)	(0.067)	(0.048)
Drama * University	-0.068	-0.111	-0.064	-0.040	-0.050	0.095	-0.001
	(0.072)	(0.119)	(0.084)	(0.139)	(0.175)	(0.087)	(0.057)
Documentary * University	-0.128*	-0.141	-0.064	-0.245*	-0.084	0.032	-0.035
	(0.068)	(0.118)	(0.081)	(0.141)	(0.168)	(0.091)	(0.064)
University	0.058	0.127	0.048	0.023	0.052	-0.043	-0.007
	(0.053)	(0.084)	(0.061)	(0.107)	(0.122)	(0.064)	(0.041)
R-squared	0.533	0.128	0.473	0.287	0.073	0.013	−0.004
Observations	619	619	619	619	619	619	619

Notes: Heteroscedasticity-robust standard errors in parentheses. The Global index is composed by indexes for individuals' knowledge, gender norms/roles and VAW attitudes; excluding individuals beliefs on others' attitudes. Higher values of the indexes in (1) to (4) stand for more progressive stances. The index "Beliefs on others' attitudes" reported in (5) takes higher values when the respondents believe that a larger share (out of 10) of their closest Facebook friends have progressive attitudes. Baseline controls described in the notes to Table 2 are included in all regressions. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A28: Medium-term heterogeneous impacts by education of household-head (HH)

Dep. Var. (Y):	*Global index*	*Knowledge*	*Gender norm-s/roles*	*VAW attitudes*	*Beliefs others' attit.*	*Intent to update picture*	*Actual picture update*
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Drama	0.048	-0.010	0.087	0.016	0.035	0.090	0.001
	(0.045)	(0.076)	(0.055)	(0.088)	(0.114)	(0.055)	(0.035)
Documentary	0.030	0.046	0.037	0.003	0.111	0.138**	0.088*
	(0.044)	(0.079)	(0.053)	(0.095)	(0.114)	(0.061)	(0.045)
Drama * HH university	0.003	-0.035	-0.002	0.045	0.030	-0.086	0.083
	(0.073)	(0.126)	(0.084)	(0.144)	(0.178)	(0.091)	(0.061)
Documentary * HH university	0.003	-0.033	-0.002	0.039	-0.013	-0.162*	-0.039
	(0.069)	(0.120)	(0.081)	(0.144)	(0.166)	(0.091)	(0.065)
HH-university	0.062	0.025	0.076	0.065	0.238*	0.039	0.005
	(0.054)	(0.084)	(0.063)	(0.105)	(0.123)	(0.066)	(0.042)
R-squared	0.534	0.118	0.479	0.287	0.067	0.024	0.005
Observations	619	619	619	619	619	619	619

Notes: Heteroscedasticity-robust standard errors in parentheses. The Global index is composed by indexes for individuals' knowledge, gender norms/roles and VAW attitudes; excluding individuals beliefs on others' attitudes. Higher values of the indexes in (1) to (4) stand for more progressive stances. The index "Beliefs on others' attitudes" reported in (5) takes higher values when the respondents believe that a larger share (out of 10) of their closest Facebook friends have progressive attitudes. Baseline controls described in the notes to Table 2 are included in all regressions. * p < 0.10, ** p < 0.05, *** p < 0.01

Table A29: Medium-term heterogeneous impacts by perceptions of social norms (SN)

Dep. Var. (Y):	*Global index*	*Knowledge*	*Gender norm-s/roles*	*VAW attitudes*	*Beliefs others' attit.*	*Intent to update picture*	*Actual picture update*
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Drama	0.072	-0.090	0.132**	0.080	0.133	-0.005	0.012
	(0.048)	(0.084)	(0.056)	(0.094)	(0.116)	(0.061)	(0.040)
Documentary	0.077*	-0.052	0.106**	0.121	0.145	-0.007	0.077*
	(0.044)	(0.082)	(0.050)	(0.097)	(0.105)	(0.061)	(0.046)
Drama * Strict SN perceptions	-0.054	0.122	-0.096	-0.109	-0.182	0.131	0.040
	(0.073)	(0.119)	(0.084)	(0.145)	(0.164)	(0.090)	(0.059)
Documentary * Strict SN perceptions	-0.108	0.168	-0.153*	-0.238*	-0.155	0.178*	-0.012
	(0.068)	(0.117)	(0.084)	(0.143)	(0.157)	(0.091)	(0.066)
Strict SN perceptions	0.049	-0.108	0.105*	0.062	-0.439***	-0.063	-0.016
	(0.051)	(0.082)	(0.061)	(0.102)	(0.118)	(0.063)	(0.041)
R-squared	0.536	0.128	0.481	0.291	0.166	0.025	−0.001
Observations	619	619	619	619	619	619	619

Notes: Heteroscedasticity-robust standard errors in parentheses. The Global index is composed by indexes for individuals' knowledge, gender norms/roles and VAW attitudes; excluding individuals beliefs on others' attitudes. Higher values of the indexes in (1) to (4) stand for more progressive stances. The index "Beliefs on others' attitudes" reported in (5) takes higher values when the respondents believe that a larger share (out of 10) of their closest Facebook friends have progressive attitudes. Baseline controls described in the notes to Table 2 are included in all regressions. * p < 0.10, ** p < 0.05, *** p < 0.01

Table A30: Medium-term heterogeneous impacts by membership in a social organization

Dep. Var. (Y):	*Global index*	*Knowledge*	*Gender norm-s/roles*	*VAW attitudes*	*Beliefs others' attit.*	*Intent to update picture*	*Actual picture update*
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Drama	0.039	-0.031	0.086*	0.002	-0.000	0.033	0.024
	(0.038)	(0.065)	(0.046)	(0.075)	(0.096)	(0.048)	(0.032)
Documentary	0.036	0.018	0.054	0.014	0.106	0.058	0.076**
	(0.036)	(0.062)	(0.043)	(0.079)	(0.091)	(0.050)	(0.037)
Drama * ORG member	0.049	-0.015	0.006	0.189	0.288	0.173	0.054
	(0.107)	(0.182)	(0.107)	(0.203)	(0.228)	(0.123)	(0.074)
Documentary * ORG member	-0.052	0.045	-0.129	0.025	-0.038	0.111	-0.016
	(0.104)	(0.186)	(0.110)	(0.197)	(0.235)	(0.127)	(0.076)
ORG member	-0.015	0.140	-0.019	-0.130	-0.016	-0.058	-0.063
	(0.077)	(0.142)	(0.075)	(0.150)	(0.166)	(0.087)	(0.046)
R-squared	0.535	0.132	0.481	0.289	0.074	0.021	0.002
Observations	619	619	619	619	619	619	619

Notes: Heteroscedasticity-robust standard errors in parentheses. The Global index is composed by indexes for individuals' knowledge, gender norms/roles and VAW attitudes; excluding individuals beliefs on others' attitudes. Higher values of the indexes in (1) to (4) stand for more progressive stances. The index "Beliefs on others' attitudes" reported in (5) takes higher values when the respondents believe that a larger share (out of 10) of their closest Facebook friends have progressive attitudes. Baseline controls described in the notes to Table 2 are included in all regressions. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A31: Placebo outcomes

Panel A: Short-term sample

Dep. Var. (Y):	*Climate change is threat*		*Vote for fuel efficiency*		*Think will be working*	
	(1)	(2)	(3)	(4)	(5)	(6)
Drama	-0.011	-0.015	0.003	-0.001	0.008	0.013
	(0.035)	(0.035)	(0.046)	(0.046)	(0.034)	(0.034)
Documentary	-0.034	-0.038	0.019	0.018	-0.001	0.018
	(0.045)	(0.044)	(0.056)	(0.055)	(0.043)	(0.042)
$Y_{baseline}$	0.501***	0.467***			0.577***	0.576***
	(0.038)	(0.041)			(0.040)	(0.041)
Controls		✓		✓		✓
R-squared	0.271	0.280	−0.003	0.021	0.310	0.313
P-value equal coef.	0.606	0.591	0.772	0.720	0.832	0.908
Observations	606	606	606	606	606	606
Mean Y (Control)	0.741	0.741	0.505	0.505	0.709	0.709

Panel B: Medium-term sample

Dep. Var. (Y):	*Climate change is threat*		*Vote for fuel efficiency*		*Think will be working*		*Corruption is an issue*	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Drama	-0.000	-0.011	-0.007	-0.010	0.056	0.045	0.012	0.008
	(0.040)	(0.039)	(0.049)	(0.050)	(0.046)	(0.047)	(0.031)	(0.033)
Documentary	0.021	0.029	0.065	0.072	0.005	0.005	0.001	0.007
	(0.041)	(0.040)	(0.050)	(0.050)	(0.047)	(0.048)	(0.032)	(0.032)
$Y_{baseline}$	0.424***	0.380***			0.001	-0.012		
	(0.040)	(0.044)			(0.041)	(0.043)		
Controls		✓		✓		✓		✓
R-squared	0.180	0.212	0.001	0.009	−0.002	0.022	−0.003	0.032
P-value equal coef.	0.597	0.328	0.147	0.108	0.267	0.393	0.727	0.987
Observations	617	617	617	617	617	617	617	617
Mean Y (Control)	0.714	0.714	0.490	0.490	0.650	0.650	0.879	0.879

Notes: Heteroscedasticity-robust standard errors in parentheses. Controls are described in the notes to Table 2. * p < 0.10, ** p < 0.05, *** p < 0.01

Table A32: Index at baseline

	Loading factor
Baseline Stance Index *(Cronbach's alpha = 0.56)*	
Knows that father determines sex of child	0.176
Agreement (1-5) on "women should be virgin until marriage"	0.456
Agreement (1-5) on "a woman should be banned from entering the kitchen or household shrine during her period"	0.442
Agreement (1-5) "parents should maintain stricter control over their daughters than their sons"	0.497
Agreement (1-5) "girls should be allowed to wear whatever they want without being harassed"	0.251
Agreement (1-5) on "a husband is justified in hitting or beating his wife if he suspects her of being unfaithful"	0.458
Would tell anyone if finds out that a friend beats or physically hurts his partner	0.214

Notes: All variables were re-oriented so that the impact of treatments on each component of the index should be positive. The column on the right reports the loading factors used for the construction of the indexes with principal component.

Table A33: Indexes at short-term follow-up

	Loading factor
Knowledge and awareness *(Cronbach's alpha = 0.31)*	
Knows that father determines sex of child	0.455
Knows that 1/3 of women in the world experience violence	0.524
Thinks that VAW is an issue in India	0.579
Mentions either virginity ritual or menstruation rituals as prevalent gender norms	0.428
Attitudes toward gender norms/roles *(Cronbach's alpha = 0.61)*	
Thinks that is it wrong to follow the above-mentioned gender norms	0.352
Agreement (1-5) on "women should be virgin until marriage"	0.384
Agreement (1-5) on "a woman should be banned from entering the kitchen or household shrine during her period"	0.385
Agreement (1-5) "women should be able to marry whomever they want, regardless of their parents' views"	0.072
Agreement (1-5) "girls should be allowed to wear whatever they want without being harassed"	0.190
Agreement (1-5) "parents should maintain stricter control over their daughters than their sons"	0.454
Agreement (1-5) "when women get rights they are taking rights away from men"	0.345
Agreement (1-5) "it is more important that a boy goes to school than a girl"	0.389
Agreement (1-5) "nowadays men should participate in child rearing and household chores rather than leaving it all to the women"	0.031
Thinks that husband and wife should have the equal say in deciding how many children to have	0.249
Attitudes toward VAW *(Cronbach's alpha = 0.54)*	
Agreement (1-5) on "a husband is justified in hitting or beating his wife if she goes out without telling him"	0.660
Agreement (1-5) on "a husband is justified in hitting or beating his wife if he suspects her of being unfaithful"	0.656
Would tell anyone if finds out that a friend beats or physically hurts his partner	0.367
Beliefs on others *(Cronbach's alpha = 0.79)*	
Imagine to pick 10 of your closest Facebook friends. According to you, how many of them think that women should be virgins till marriage?	0.484
Imagine to pick 10 of your closest Facebook friends. According to you, how many of them think that men should be virgins till marriage?	0.504
Imagine to pick 10 of your closest Facebook friends. According to you, how many of them think that a husband is justified in hitting or beating his wife if he suspects her of being unfaithful?	0.511
Imagine to pick 10 of your closest Facebook friends. According to you, how many of them think that a husband is justified in hitting or beating his wife if she goes out without telling him?	0.501

Notes: The *Global Index* (Cronbach's alpha = 0.71) is created using all variables reported above with the exception of those contained in the *Beliefs on others* index. All variables were re-oriented so that the impact of treatments on each component of the index should be positive. The column on the right reports the loading factors used for the construction of the indexes with principal component.

Table A34: Indexes at medium-term follow-up

	Loading factor
Knowledge and awareness *(Cronbach's alpha = 0.24)*	
Knows that father determines sex of child	0.540
Knows that 1/3 of women in the world experience violence	0.433
Thinks that VAW is an issue in India	0.596
Mentions either virginity ritual or menstruation rituals as prevalent gender norms	0.406
Attitudes toward gender norms/roles *(Cronbach's alpha = 0.60)*	
Thinks that is it wrong to follow the above-mentioned gender norms	0.367
Agreement (1-5) on "women should be virgin until marriage"	0.359
Agreement (1-5) on "a woman should be banned from entering the kitchen or household shrine during her period"	0.338
Agreement (1-5) "women should be able to marry whomever they want, regardless of their parents' views"	0.087
Agreement (1-5) "girls should be allowed to wear whatever they want without being harassed"	0.232
Agreement (1-5) "parents should maintain stricter control over their daughters than their sons"	0.430
Agreement (1-5) "when women get rights they are taking rights away from men"	0.370
Agreement (1-5) "it is more important that a boy goes to school than a girl"	0.444
Agreement (1-5) "nowadays men should participate in child rearing and household chores rather than leaving it all to the women"	0.091
Thinks that husband and wife should have the equal say in deciding how many children to have	0.181
Attitudes toward VAW *(Cronbach's alpha = 0.71)*	
Agreement (1-5) on "a husband is justified in hitting or beating his wife if she goes out without telling him"	0.479
Agreement (1-5) on "a husband is justified in hitting or beating his wife if he suspects her of being unfaithful"	0.467
Agreement (1-5) on "a husband is justified in hitting or beating his wife if she neglects the house or the children"	0.522
Agreement (1-5) on "a husband is justified in hitting or beating his wife if she shows disrespect for in-laws"	0.504
Would tell anyone if finds out that a friend beats or physically hurts his partner	0.159
Beliefs on others *(Cronbach's alpha = 0.69)*	
Imagine to pick 10 of your closest Facebook friends. According to you, how many of them think that women should be virgins till marriage?	0.496
Imagine to pick 10 of your closest Facebook friends. According to you, how many of them think that a husband is justified in hitting or beating his wife if he suspects her of being unfaithful?	0.630
Imagine to pick 10 of your closest Facebook friends. According to you, how many of them think that a husband is justified in hitting or beating his wife if she goes out without telling him?	0.598

Notes: The *Global Index* (Cronbach's alpha = 0.74) is created using all variables reported above with the exception of those contained in the *Beliefs on others* index. All variables were re-oriented so that the impact of treatments on each component of the index should be positive. The column on the right reports the loading factors used for the construction of the indexes with principal component.

B Figures

Figure B1: Geographic targeting and ad banner used to recruit study participants

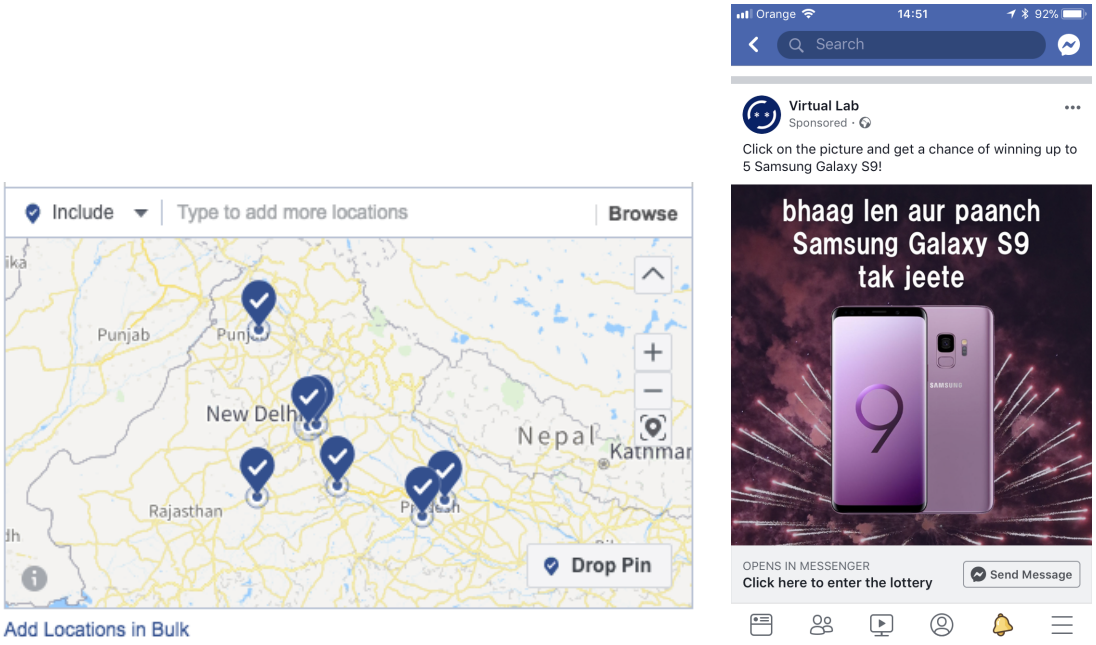


Figure B2: Example of mobile video screening and surveying within FB Messenger

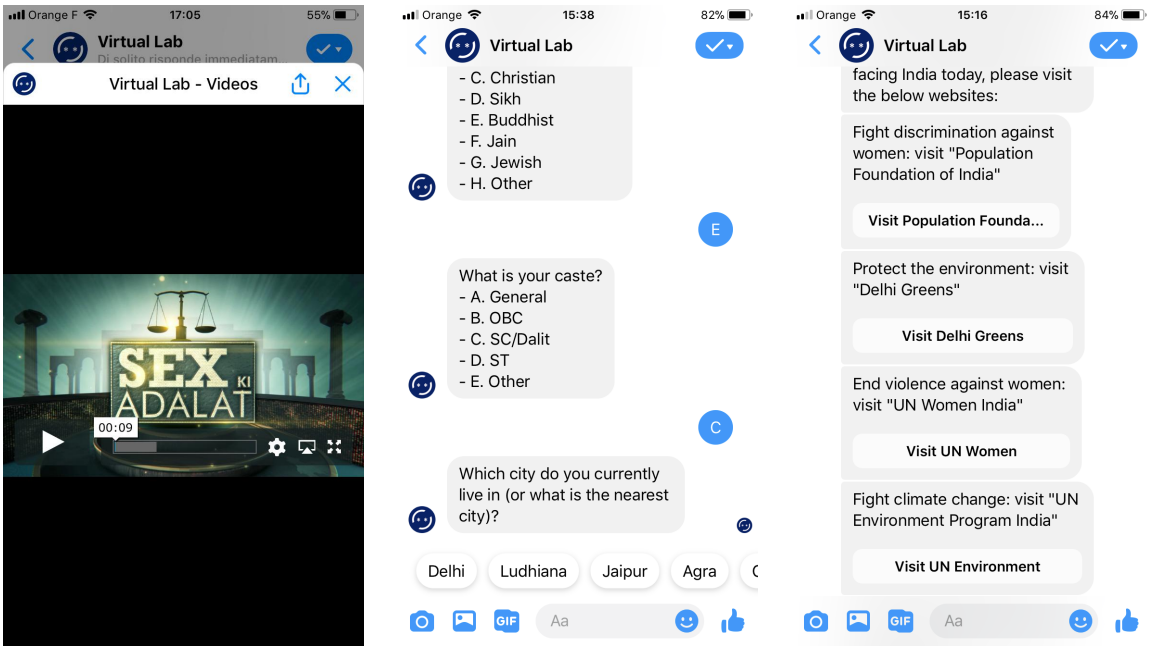
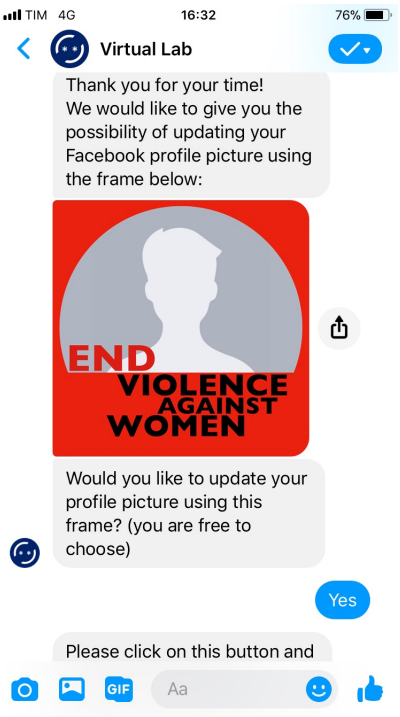


Figure B3: VAW frame to be added on the FB profile picture



References

Abramsky, T., Devries, K., Kiss, L., Nakuti, J., Kyegombe, N., Starmann, E., Cundill, B., Francisco, L., Kaye, D., Musuya, T. et al. (2014), 'Findings from the sasa! study: a cluster randomized controlled trial to assess the impact of a community mobilization intervention to prevent violence against women and reduce HIV risk in ampala, Uganda', *BMC Medicine* **12**(1), 1–17.

Abramsky, T., Devries, K. M., Michau, L., Nakuti, J., Musuya, T., Kyegombe, N. and Watts, C. (2016), 'The impact of sasa!, a community mobilisation intervention, on women's experiences of intimate partner violence: secondary findings from a cluster randomised trial in Kampala,Uganda', *Journal of Epidemiology and Community Health* **70**(8), 818–825.

Abramsky, T., Watts, C. H., Garcia-Moreno, C., Devries, K., Kiss, L., Ellsberg, M., Jansen, H. A. and Heise, L. (2011), 'What factors are associated with recent intimate partner violence? findings from the who multi-country study on women's health and domestic violence', *BMC Public Health* **11**(1), 1–17.

Akerlof, G. A. and Kranton, R. E. (2000), 'Economics and identity', *The Quarterly Journal of Economics* **115**(3), 715–753.

Alan, S., Ertac, S. and Mumcu, I. (2018), 'Gender stereotypes in the classroom and effects on achievement', *Review of Economics and Statistics* **100**(5), 876–890.

Alatas, V., Chandrasekhar, A. G., Mobius, M., Olken, B. A. and Paladines, C. (2019), When celebrities speak: A nationwide twitter experiment promoting vaccination in indonesia, Technical report, National Bureau of Economic Research.

Alesina, A., Giuliano, P. and Nunn, N. (2013), 'On the origins of gender roles: Women and the plough', *The Quarterly Journal of Economics* **128**(2), 469–530.

Allcott, H., Braghieri, L., Eichmeyer, S. and Gentzkow, M. (2020), 'The welfare effects of social media', *American Economic Review* **110**(3), 629–76.

Allcott, H. and Gentzkow, M. (2017), 'Social media and fake news in the 2016 election', *Journal of Economic Perspectives* **31**(2), 211–36.

Arias, E. (2019), 'How does media influence social norms? experimental evidence on the role of common knowledge', *Political Science Research and Methods* **7**(3), 561–578.

Bandura, A. (2004), 'Health promotion by social cognitive means', *Health education & behavior* **31**(2), 143–164.

Banerjee, A., Alsan, M., Breza, E., Chandrasekhar, A. G., Chowdhury, A., Duflo, E., Goldsmith-Pinkham, P. and Olken, B. A. (2020), Messages on COVID-19 prevention in india increased symptoms reporting and adherence to preventive behaviors among 25 million recipients with similar effects on non-recipient members of their communities, Technical report, National Bureau of Economic Research.

Banerjee, A., La Ferrara, E. and Orozco-Olvera, V. (2019*a*), Entertainment, education, and attitudes toward domestic violence, *in* 'AEA Papers and Proceedings', Vol. 109, pp. 133–37.

Banerjee, A., La Ferrara, E. and Orozco-Olvera, V. H. (2019*b*), The entertaining way to behavioral change: Fighting HIV with MTV, Technical report, National Bureau of Economic Research.

Benoit, W. L. (1987), 'Argumentation and credibility appeals in persuasion', *Southern Journal of Communication* **52**(2), 181–197.

Berg, G. and Zia, B. (2017), 'Harnessing emotional connections to improve financial decisions: Evaluating the impact of financial education in mainstream media', *Journal of the European Economic Association* **15**(5), 1025–1055.

Bertrand, M. (2020), Gender in the twenty-first century, *in* 'AEA Papers and Proceedings', Vol. 110, pp. 1–24.

Bertrand, M., Kamenica, E. and Pan, J. (2015), 'Gender identity and relative income within households', *The Quarterly Journal of Economics* **130**(2), 571–614.

Bicchieri, C. (2005), *The grammar of society: The nature and dynamics of social norms*, Cambridge University Press.

Bicchieri, C. (2016), *Norms in the wild: How to diagnose, measure, and change social norms*, Oxford University Press.

Blair, G., Littman, R. and Paluck, E. L. (2019), 'Motivating the adoption of new community-minded behaviors: An empirical test in Nigeria', *Science Advances* **5**(3), eaau5175.

Bond, R. M., Fariss, C. J., Jones, J. J., Kramer, A. D., Marlow, C., Settle, J. E. and Fowler, J. H. (2012), 'A 61-million-person experiment in social influence and political mobilization', *Nature* **489**(7415), 295–298.

Bordalo, P., Coffman, K., Gennaioli, N. and Shleifer, A. (2019), 'Beliefs about gender', *American Economic Review* **109**(3), 739–73.

Borker, G. et al. (2021), *Safety first: Perceived risk of street harassment and educational choices of women*, World Bank.

Bourey, C., Williams, W., Bernstein, E. E. and Stephenson, R. (2015), 'Systematic review of structural interventions for intimate partner violence in low-and middle-income countries: organizing evidence for prevention', *BMC Public Health* **15**(1), 1–18.

Brown, W. J. and Singhal, A. (1999), 'Entertainment-education media strategies for social change: Promises and problems', *Mass Media Social Control and Social Change* pp. 263–280.

Bruhn, M. and McKenzie, D. (2009), 'In pursuit of balance: Randomization in practice in development field experiments', *American Economic Journal: Applied Economics* **1**(4), 200–232.

Burchell, K., Rettie, R. and Patel, K. (2013), 'Marketing social norms: social marketing and the 'social norm approach'', *Journal of Consumer Behaviour* **12**(1), 1–9.

Bursztyn, L., González, A. L. and Yanagizawa-Drott, D. (2020), 'Misperceived social

norms: Women working outside the home in Saudi Arabia', *American Economic Review* **110**(10), 2997–3029.

Carlana, M. (2019), 'Implicit stereotypes: Evidence from teachers' gender bias', *The Quarterly Journal of Economics* **134**(3), 1163–1224.

Chandy, R. K., Johar, G. V., Moorman, C. and Roberts, J. H. (2021), 'Better marketing for a better world'.

Constantinides, E. (2014), 'Foundations of social media marketing', *Procedia-Social and Behavioral Sciences* **148**, 40–57.

Dhar, D., Jain, T. and Jayachandran, S. (2022), 'Reshaping adolescents' gender attitudes: Evidence from a school-based experiment in India', *American Economic Review* **112**(3), 899–927.

Donati, D. (2019), 'Mobile Internet access and political outcomes: Evidence from South Africa', *Universitat Pompeu Fabra, Mimeo* .

Dumville, J. C., Torgerson, D. J. and Hewitt, C. E. (2006), 'Reporting attrition in randomised controlled trials', *Bmj* **332**(7547), 969–971.

Duvvury, N., Callan, A., Carney, P. and Raghavendra, S. (2013), 'Intimate partner violence: Economic costs and implications for growth and development'.

Enikolopov, R., Makarin, A. and Petrova, M. (2020), 'Social media and protest participation: Evidence from Russia', *Econometrica* **88**(4), 1479–1514.

Fatehkia, M., Kashyap, R. and Weber, I. (2018), 'Using facebook ad data to track the global digital gender gap', *World Development* **107**, 189–209.

Ferri, M., Allara, E., Bo, A., Gasparrini, A. and Faggiano, F. (2013), 'Media campaigns for the prevention of illicit drug use in young people', *Cochrane Database of Systematic Reviews* (6).

Flood, M. and Pease, B. (2009), 'Factors influencing attitudes to violence against women', *Trauma, violence, & abuse* **10**(2), 125–142.

Frank, L. B., Murphy, S. T., Chatterjee, J. S., Moran, M. B. and Baezconde-Garbanati, L. (2015), 'Telling stories, saving lives: creating narrative health messages', *Health communication* **30**(2), 154–163.

Gerber, A. S. and Green, D. P. (2012), *Field experiments: Design, analysis, and interpretation*, WW Norton.

Goffman, E. (1963), 'Stigma englewood cliffs', *NJ: Spectrum* pp. 127–128.

Green, D. P., Wilke, A. M. and Cooper, J. (2020), 'Countering violence against women by encouraging disclosure: A mass media experiment in rural Uganda', *Comparative Political Studies* **53**(14), 2283–2320.

Hall, A. E. and Bracken, C. C. (2011), '"I really liked that movie": Testing the relationship

between trait empathy, transportation, perceived realism, and movie enjoyment.', *Journal of Media Psychology: Theories, Methods, and Applications* **23**(2), 90.

Hoff, K. and Stiglitz, J. E. (2010), 'Equilibrium fictions: A cognitive approach to societal rigidity', *American Economic Review* **100**(2), 141–46.

Hoff, K. and Walsh, J. (2018), 'The whys of social exclusion: Insights from behavioral economics', *The World Bank Research Observer* **33**(1), 1–33.

Jensen, R. and Oster, E. (2009), 'The power of TV: Cable television and women's status in India', *The Quarterly Journal of Economics* **124**(3), 1057–1094.

Jewkes, R., Willan, S., Heise, L., Washington, L., Shai, N., Kerr-Wilson, A. and Christofides, N. (2020), 'Effective design and implementation elements in interventions to prevent violence against women and girls', *What Works to prevent VAWG* .

Kearney, M. S. and Levine, P. B. (2019), 'Early childhood education by television: Lessons from Sesame Street', *American Economic Journal: Applied Economics* **11**(1), 318–50.

Kerr-Wilson, A., Gibbs, A., McAslan Fraser, E., Ramsoomar, L., Parke, A., Khuwaja, H. M. and Jewkes, R. (2020), 'A rigorous global evidence review of interventions to prevent violence against women and girls', *What Works to prevent violence among women and girls global Programme, Pretoria, South Africa* .

Kling, J. R., Liebman, J. B. and Katz, L. F. (2007), 'Experimental analysis of neighborhood effects', *Econometrica* **75**(1), 83–119.

Kondylis, F., Legovini, A., Vyborny, K., Zwager, A. M. T. and Cardoso De Andrade, L. (2020), 'Demand for safe spaces: Avoiding harassment and stigma', *World Bank Policy Research Working Paper* (9269).

La Ferrara, E., Chong, A. and Duryea, S. (2012), 'Soap operas and fertility: Evidence from Brazil', *American Economic Journal: Applied Economics* **4**(4), 1–31.

Lavy, V. and Sand, E. (2015), On the origins of gender human capital gaps: Short and long term consequences of teachers' stereotypical biases, Technical report, National Bureau of Economic Research.

Levy, R. and Mattsson, M. (2021), 'The effects of social movements: Evidence from# MeToo', *Available at SSRN 3496903* .

Mackie, G. (1996), 'Ending footbinding and infibulation: A convention account', *American Sociological Review* pp. 999–1017.

McKenzie-Mohr, D. (2000), 'Fostering sustainable behavior through community-based social marketing.', *American Psychologist* **55**(5), 531.

Miller, D. T. and McFarland, C. (1987), 'Pluralistic ignorance: When similarity is interpreted as dissimilarity.', *Journal of Personality and social Psychology* **53**(2), 298.

Moyer-Gusé, E. (2008), 'Toward a theory of entertainment persuasion: Explaining the

persuasive effects of entertainment-education messages', *Communication Theory* **18**(3), 407–425.

Nyhan, B., Reifler, J., Richey, S. and Freed, G. L. (2014), 'Effective messages in vaccine promotion: a randomized trial', *Pediatrics* **133**(4), e835–e842.

Ochoa, C. Y., Murphy, S. T., Frank, L. B. and Baezconde-Garbanati, L. A. (2020), 'Using a culturally tailored narrative to increase cervical cancer detection among Spanish-speaking Mexican-American women', *Journal of Cancer Education* **35**(4), 736–742.

Oliver, M. B., Dillard, J. P., Bae, K. and Tamul, D. J. (2012), 'The effect of narrative news format on empathy for stigmatized groups', *Journalism & Mass Communication Quarterly* **89**(2), 205–224.

Orozco-Olvera, V., Shen, F. and Cluver, L. (2019), 'The effectiveness of using entertainment education narratives to promote safer sexual behaviors of youth: A meta-analysis, 1985-2017', *PloS one* **14**(2), e0209969.

Paluck, E. L. and Green, D. P. (2009), 'Deference, dissent, and dispute resolution: An experimental intervention using mass media to change norms and behavior in Rwanda', *American Political Science Review* **103**(4), 622–644.

Petrova, M., Bursztyn, L., Egorov, G. and Enikolopov, R. (2020), 'Social media and xenophobia: Evidence from Russia'.

Raghavendra, S., Kim, K., Ashe, S., Chadha, M., Asante, F. A., Piiroinen, P. T. and Duvvury, N. (2019), The macroeconomic loss due to violence against women and girls: the case of Ghana, Technical report, Working Paper.

Rao, N., Donati, D. and Orozco-Olvera, V. (2020), 'Conducting surveys and interventions entirely online: a Virtual Lab practitioner's manual', *Working Paper* .
URL: *https://drive.google.com/file/d/1LsZzH32tLpnodGzE10QpRmtOR2HpGIWl*

Sardinha, L. and Catalán, H. E. N. (2018), 'Attitudes towards domestic violence in 49 low-and middle-income countries: A gendered analysis of prevalence and country-level correlates', *PloS one* **13**(10), e0206101.

Shawky, S., Kubacki, K., Dietrich, T. and Weaven, S. (2019), 'Using social media to create engagement: A social marketing review', *Journal of Social Marketing* .

Singhal, A., Cody, M. J., Rogers, E. M. and Sabido, M. (2003), *Entertainment-education and social change: History, research, and practice*, Routledge.

Singhal, A. and Rogers, E. (2012), *Entertainment-education: A communication strategy for social change*, Routledge.

Terrier, C. (2015), 'Giving a little help to girls? evidence on grade discrimination and its effect on students' achievement'.

W. Vaughan, Everett M. Rogers, A. S. R. M. S. P. (2000), 'Entertainment-education and HIV/AIDS prevention: A field experiment in Tanzania', *Journal of Health Communication* **5**(sup1), 81–100.

Wagman, J. A., Gray, R. H., Campbell, J. C., Thoma, M., Ndyanabo, A., Ssekasanvu, J., Nalugoda, F., Kagaayi, J., Nakigozi, G., Serwadda, D. et al. (2015), 'Effectiveness of an integrated intimate partner violence and HIV prevention intervention in Rakai, Uganda: analysis of an intervention in an existing cluster randomised cohort', *The Lancet Global Health* **3**(1), e23–e33.

Wang, H. and Singhal, A. (2016), 'East Los High: Transmedia edutainment to promote the sexual and reproductive health of young Latina/o Americans', *American Journal of Public Health* **106**(6), 1002–1010.

WHO (2013), *Global and regional estimates of violence against women: prevalence and health effects of intimate partner violence and non-partner sexual violence*, World Health Organization.

World-Bank (2014), *World Development Report 2015: Mind, Society, and Behavior*, The World Bank.