



INTERNATIONAL
FOOD POLICY
RESEARCH
INSTITUTE

IFPRI Discussion Paper 02210

December 2023

***C'est la Vie!:* Mixed Impacts of an Edutainment
Television Series in West Africa**

Malick Dione

Jessica Heckert

Melissa Hidrobo

Agnes Le Port

Amber Peterman

Moustapha Seye

Nutrition, Diets, and Health Unit

Poverty, Gender, and Inclusion Unit

INTERNATIONAL FOOD POLICY RESEARCH INSTITUTE

The International Food Policy Research Institute (IFPRI), a CGIAR Research Center established in 1975, provides research-based policy solutions to sustainably reduce poverty and end hunger and malnutrition. IFPRI's strategic research aims to foster a climate-resilient and sustainable food supply; promote healthy diets and nutrition for all; build inclusive and efficient markets, trade systems, and food industries; transform agricultural and rural economies; and strengthen institutions and governance. Gender is integrated in all the Institute's work. Partnerships, communications, capacity strengthening, and data and knowledge management are essential components to translate IFPRI's research from action to impact. The Institute's regional and country programs play a critical role in responding to demand for food policy research and in delivering holistic support for country-led development. IFPRI collaborates with partners around the world.

AUTHORS

Malick Dione (Malick.Dione@cgiar.org) is a Research Analyst in the Nutrition, Diets, and Health unit of the International Food Policy Research Institute (IFPRI), Dakar, Senegal.

Jessica Heckert (j.heckert@cgiar.org) is a Research Fellow in the Poverty, Gender, and Inclusion (PGI) unit of IFPRI

Melissa Hidrobo (m.hidrobo@cgiar.org) is a Senior Research Fellow in the PGI unit of IFPRI

Agnes le Port (agnes.leport@ird.fr) is a Research Fellow in the Montpellier Interdisciplinary Center on Sustainable Agri-food Systems (MoISA) at the Institute for Research of Development (IRD), Montpellier, France.

Amber Peterman (amberpeterman@gmail.com) is a Research Associate Professor in the Department of Public Policy at the University of North Carolina at Chapel Hill.

Moustapha Seye (cmoustaphaseye@gmail.com) is a socio-anthropologist at the Laboratoire de Recherche sur les Transformations Économiques et Sociales (LARTES), à l'Institut Fondamental d'Afrique Noire-Cheikh Anta Diop de l'Université de Dakar, Senegal.

Notices

¹ IFPRI Discussion Papers contain preliminary material and research results and are circulated in order to stimulate discussion and critical comment. They have not been subject to a formal external review via IFPRI's Publications Review Committee. Any opinions stated herein are those of the author(s) and are not necessarily representative of or endorsed by IFPRI.

² The boundaries and names shown and the designations used on the map(s) herein do not imply official endorsement or acceptance by the International Food Policy Research Institute (IFPRI) or its partners and contributors.

³ Copyright remains with the authors. The authors are free to proceed, without further IFPRI permission, to publish this paper, or any revised version of it, in outlets such as journals, books, and other publications.

ABSTRACT

Edutainment shows promise in changing behavior at scale, yet little is known about how to maximize impacts. We undertake an experimental evaluation of a popular television series, *C'est la vie!*, delivered through film clubs in rural Senegal, on violence against women and girls, and sexual and reproductive health knowledge, attitudes, and behaviors. We find *C'est la vie!* improved knowledge three months after film clubs ended, as well as violence-related attitudes nine months later, however, find no impacts on behaviors. We investigate design components intended to strengthen impacts, generally finding no additional impacts from post-screening discussions, engaging men, and podcasts.

Keywords: Edutainment, Violence against women and girls, sexual and reproductive health, Senegal

ACKNOWLEDGEMENTS

“We thank implementing partners, MobiCiné and RAES, as well as Keewu Production, and in particular Ousseynou Thiam, Mbathio Diaw Ndiaye, Louise Lavabre, Julia Branchat, and Alexandre Rideau. We thank research partners, including the hard-working field teams of ASSMOR Consulting and LARTES, in particular Assane Thioune, Justine Briaux, Fatma Lamesse, Codé Ló, Abdou Salam Fall, and Annick Nganya Tcham. We also would like to acknowledge the adolescent girls and women who took part in our study. We thank the CGIAR Research Program on Policies, Institutions, and Markets (PIM) and an Anonymous donor for funding this work. Finally, we thank IFPRI colleagues Nicole Rosenvaigue and Rock Zagre for excellent grant administration and assistance with survey coding, as well as comments received from seminar attendees at the Center for Global Development, Bocconi University, IFPRI, Trinity College Dublin and UNICEF Tanzania. This study was registered in the AER RCT registry: AEARCTR-0005134”

1. Introduction

Mass media campaigns have been used extensively across the globe to influence health-related behavior. They allow for the integration of standardized repeated messages in an entertaining format, while invoking cognitive or emotional responses (La Ferrara 2016; Wakefield, Loken, and Hornik 2010). Mass media that delivers educational content in an entertaining way is also known as *edutainment* and aims to change individuals' behavior and attitudes by absorbing them into a story where messages are integrated into the narrative (La Ferrara 2016). There are multiple theoretical approaches that inform the development of edutainment and its ability to contribute to changes at the individual and societal levels (Sood, Riley, and Alarcon 2017; Wang and Singhal 2021). The most commonly evoked is Bandura's social cognitive theory, which emphasizes social influences on learning and behavior change; participants learn through observing characters they can relate to, and begin to understand consequences and set expectations based on the experiences of these characters (Bandura 2001; 2004).

Edutainment is increasingly used to deliver messages for social progress and development, including for reducing violence against women and girls (VAWG) and improving sexual and reproductive health (SRH). Strategies for improving these outcomes have traditionally used social behavior change communication (SBCC) approaches that are delivered in person to individuals or groups, through community outreach or at health facilities (Aboud and Singla 2012). Successful SBCC approaches tend to be intensive, require high local capacity and be relatively costly (Michaels-Igbokwe et al. 2016). Compared to in person approaches, delivering SBCC through mass media, such as radio or television has the potential to reach a large audience and notably decrease the cost per person reached (Wakefield, Loken, and Hornik 2010). While radio has long been a strategy for reaching dispersed rural populations, television and social media are increasingly viable delivery methods. In 2019, 62 percent of Senegalese households owned a

television (86 percent urban and 38 percent rural), and 63 percent of women aged 15-49 watched television at least once a week (ANSD and ICF 2020). Mass media may also reach a younger demographic, who face barriers in accessing information from traditional sources, but have higher exposure to technology and social media.

Research dating back to the 1990s shows that edutainment has resulted in positive impacts on SRH including HIV/AIDS, fertility, and family planning (Banerjee, La Ferrara, and Orozco 2019b; Glennerster, Murray, and Pouliquen 2022; Orozco-Olvera, Shen, and Cluver 2019; Birdthistle et al. 2022). In addition, studies have demonstrated that short videos, soap-operas, and radio-dramas can decrease VAWG in the African region (Banerjee, La Ferrara, and Orozco 2019a; Christia et al. 2022; Green, Wilke, and Cooper 2020; Green et al. 2022). While these results are promising, knowledge gaps remain. First, these edutainment products and accompanying studies have primarily targeted a focused set of health outcomes for behavior change. It remains unclear whether longer series that cover a more comprehensive range of health-related topics can lead to synergies across different outcomes, or conversely, if diluting content on any one theme ultimately diminishes impacts. Second, most television-based edutainment is delivered in urban areas with stable access to service (whether cable or satellite), internet, and electricity. While television is becoming increasingly common in rural areas, this presents new challenges due to unstable access to electricity, as well as a plurality of local languages that do not coincide with the broadcasted language. In addition, delivery in rural areas raises questions on acceptability of characters or storylines and engagement of viewers who may be more conservative or unable to relate to narratives. Third, we still know very little about what design features, including which platforms and complementary activities, lead to larger impacts. Finally, previous work has primarily looked at short-term outcomes at one specific moment in time. It is unclear how impacts evolve over time and whether edutainment can

lead to sustained impacts on knowledge, attitudes, or behaviors after interventions end.

We address several evidence gaps through a cluster-randomized controlled trial (cRCT) of *C'est la vie!*, a multi-topic television-based edutainment series focused on VAWG and SRH themes that has reached millions of viewers across West and Central Africa. In particular, we investigate four main questions. First, we explore whether exposure to *C'est la vie!* delivered through film clubs improves a wide range of outcomes related to VAWG and SRH among adolescent girls and young women in rural Senegal. Second, we explore design features to see if changing the way the series is delivered leads to larger impacts. These features include i) adding post-viewing discussions and workshops on key themes, ii) varying whether the girls and young women selected to participate were encouraged to bring a male or female guest; and iii) extending exposure to content via audio-podcasts. While the first two design variations were planned in the initial study, the third was a shift mid-study to accommodate continued implementation after COVID-19 related shutdowns. Third, we follow the sample of girls and young women, interviewing them three and nine months following the conclusion of the film clubs to see how impacts evolve over time. Finally, we explore potential pathways through which edutainment leads to behavior change using both data from the cRCT and qualitative data collected during the intervention.

The study takes places in two regions of rural Senegal, where populations have low exposure to the series and new dubbing into local languages provides a unique opportunity to experimentally test its effectiveness. We randomly assigned 120 rural villages to three arms: Treatment 1 (T1), *C'est la vie!* screenings via film clubs; Treatment 2 (T2), same as arm 1 with the addition of post-screening discussion groups and interactive workshops (“pedagogical kits”), and Control, a placebo television series with no themes related to the study screened via film clubs in the same way as T1. Film club participants received tickets to the screenings,

which allowed them to bring one guest, and were randomly encouraged to invite either a male guest (their partner if married, family member or friend if not) or a female guest. Both quantitative and qualitative evidence shows that viewers overwhelmingly loved *C'est la vie!*, appreciating not only the messages, but the opportunity to be exposed to new ways of thinking and gather with friends and family¹.

Film clubs targeted adolescent girls and young women aged 14 to 34 years old as primary participants, who are likely to encounter themes of *C'est la vie!* in their own lives as they make life transitions. Following prior literature, we hypothesized three main, potentially complementary, pathways through which *C'est la vie!* improves their knowledge, attitudes, and behaviors (La Ferrara 2016). The first is by providing viewers with information; for example, information on different forms of contraceptives that are available or information on the negative effects of female genital mutilation (FGM). The second is through the power of observational learning (Bandura 2001; La Ferrara 2016). Through images, storylines, and role models, viewers see characters' positive and negative experiences, their consequences, and learn how they can imitate or model behaviors that will benefit them. For example, in *C'est la vie!*, viewers see the case of a young girl who is married too soon, who eventually dies due to complications in childbirth. The parents of the girl express remorse, offering an alternative for viewers to avoid this same negative outcome (to delay marriage of their daughters). The third is through interpersonal dialogue, where viewers discuss with each other or other family members what they see in the films, resulting in a 'conformity effect' or diffusion of norms (Papa and Singhal 2009). For example, when presented with a situation where a woman is caught in an abusive relationship, discussion could prompt viewers to uncover that individuals in their social circles believe she should leave

¹ See Le Port et al. (2022) for more information on the intervention's adaptation, implementation fidelity, participants' responsiveness or engagement, and series appropriateness.

the relationship, or that they support intervention from friends or family—potentially leading to further diffusion of these views. These pathways may be enhanced through design and delivery features. For example, in our case, post-screening discussions and workshops are meant to reinforce the third pathway promoting interpersonal dialogue. Similarly, inviting men is meant to reinforce the information and interpersonal pathways. Men not only play a critical role across numerous behavior outcomes, but may also have different information and attitudes than women and girls.

The intervention started in December 2019 and was meant to last five months, however, in March 2020, the intervention was interrupted due to the COVID-19 pandemic and a presidential decree in Senegal which prohibited gatherings of more than 10 people. With approximately half of the intervention completed, a phone survey was undertaken in June 2020 to capture the short-term program impacts on VAWG and SRH knowledge and attitudes (but not behaviors). To continue providing participants with the *C'est la vie!* content during COVID-19 restrictions, the film club platform changed to podcasts for a random set of villages. In particular, within each arm, villages were randomly assigned to “continued treatment” via mobile phone transmission of podcasts (60%) versus no activities (40%). An endline in-person survey was subsequently undertaken in December 2020 to measure impacts on VAWG and SRH knowledge, attitudes, and behaviors, nine months after the film clubs ended.

We find that in the short run (three-months post film clubs), *C'est la vie!* increases knowledge of VAWG and SRH, but attitudes are unchanged. In the medium term (nine-months post film clubs), knowledge gains have disappeared, however we find significant improvements in VAWG attitudes and norms, which are driven by improvements in attitudes on child marriage and FGM. We find no impacts on aggregate indices of VAWG and SRH behaviors, which indicates that gains in knowledge and attitudes are not enough to change behavior, at least not

within our study period. In general, we find little additional impact from adding pedagogical kits, inviting male guests, or extending the intervention with podcast during COVID-19. The exception is that inviting male guests, as compared to female guests, leads to larger increases in SRH knowledge. Lastly, we find that women who were more transported by the series had significantly larger impacts compared to those that were less transported, suggesting that the power of edutainment lies in its ability to absorb viewers into the storyline. While engagement in the series is not exogenously determined, changes in knowledge and observational learning are also supported by complementary qualitative data, which indicate that women felt enlightened by the narratives in the film and shared the story and lessons with family and friends.

Taken together, these results suggest that providing information through an entertaining narrative is effective at improving knowledge in the short run, but these gains may fade over time. In contrast, changes in attitudes in our setting take time to manifest. These findings are consistent with recent literature on edutainment and mass media in Africa showing strong impacts on knowledge, with variable impacts on attitudes and behaviors. For example, in Nigeria an evaluation of MTV's *Shuga* found increases in HIV-related knowledge approximately eight months after the intervention and more nuanced changes on risky sexual behavior (Banerjee, La Ferrara, and Orozco 2019b). In Burkina Faso, a two and a half year radio-based mass media campaign, increased women's use of modern contraceptives, with the primary mechanism being an information channel, increasing women's knowledge around contraception, including decreases in misperceptions about side effects (Glennerster, Murray, and Pouliquen 2022). With respect to VAWG, in Uganda and Egypt, short videos or a multi-media series had no impact on attitudes even though they increased reporting of violence against women or help seeking behaviors (Christia et al. 2022; Green, Wilke, and Cooper 2020). Finally, a radio drama in rural Tanzania focused on themes of early and forced marriage changed

related attitudes and perceived norms in the short-term (two weeks later), however, it did not change norms related to IPV and effects were smaller or no longer detectable 15 months after exposure (Green et al. 2022). This study adds to the growing evidence on edutainment, in particular by showing how effects of a multi-topic television series change over time, exploring design features, and mechanisms of impact.

2. Program design

2.1 Intervention

C'est la vie! is a popular West African television series developed by the *Reseau Africain d'Education à la Santé* (RAES) and produced by Keewu Productions, a Senegalese non-governmental organization (NGO).² The plot revolves around everyday life in a maternal health clinic in Senegal, featuring four main female protagonists. The series is specifically designed to address issues related to adolescents' and women's rights: themes presented in the series focus on VAWG (*i.e.*, IPV, forced and early marriage, sexual abuse, FGM and illegal abortion), SRH (*i.e.*, family planning, use of contraceptives, HIV and sexually transmitted infections), and maternal and child health (*i.e.*, skilled attendance, antenatal and postnatal care, breastfeeding). In addition, more general themes are woven into the narrative on gender equality, couple communication, and women's empowerment. The intervention evaluated in this study focuses on *C'est la vie!*, season 1, which includes 26 episodes of approximately 25 minutes each which had been dubbed into five local languages.

RAES also developed a multi-media information campaign around *C'est la vie!*, which was designed to promote discussion of key themes, and consisted of radio adaptations, a web-based mini-series, social media materials, and community

² For more information on the *C'est la vie!* series and the pedagogical kit, see the website: <https://cestlavie.tv/>

activities. As part of these community activities, pedagogical kits were developed in collaboration with United Nations partners. The pedagogical kits aimed to strengthen the impacts of the television series by using trained facilitators to lead discussions following the screenings, along with thematic workshops for small groups. The activities aimed to stimulate personal reflections and collective debates using games, exercises, and video extracts from the series (among others). See Table B1 in Online Appendix B for a list of episodes, themes, and discussion topics related to *C'est la vie!* season 1.

2.2 Study design

To test the impact of *C'est la vie!*, we designed a cRCT involving 120 rural villages across two regions of Senegal: Kaolack in central Senegal, and Kolda in the south.³ Stratified by region, villages were randomly assigned to three arms:

- **T1 (CLV):** *C'est la vie!* season 1 transmitted through film clubs. Season 1 is composed of 26 episodes, each lasting approximately 25 minutes. Each screening showed three episodes in a row every other week, using public primary schools during after school hours.
- **T2 (CLV + Kit):** Same as Treatment 1 with the addition of adapted pedagogical kits composed of 30- to 45-minute facilitated discussions after each screening, and monthly workshops (four total, one focused on sexuality and sexual health, one focused on sexual violence, and two focused on IPV) lasting 1.5 hours each⁴.

³ Study villages were randomly selected from the universe of villages in each region with populations of 500 households or lower, yet had at least 34 qualifying adolescent girls and young women, had a primary school and were accessible by motor vehicle.

⁴ The pedagogical kits were adapted for feasibility of implementation. The post-screening discussions which were designed to be 30 minutes per episode, were reduced to 30-45 minutes total across the three episodes screened. Similarly, the half day workshops were reduced to 1.5 hours. See Le Port et al 2022 for more detail.

- **Control:** A placebo Senegalese television series called *Golden*, a drama about a family who runs a gold mining company (without messages related to VAWG or SRH), screened through film clubs. The placebo film clubs were implemented similarly to the *C'est la vie!* film clubs in terms of location, frequency and duration, and thus allows us to specifically test the effect of the series content and net out other aspects of the intervention, including the effect of social gathering and general exposure to television.

Randomization was conducted at the village level, because it was expected that participants would discuss the content of the intervention with other community members; thus, even individuals who were not directly invited to the film clubs could be exposed to the messages via spillover effects. In each study arm, adolescent girls and young women were invited to attend the film clubs and allowed to bring one guest. In all three arms, the guest was cross-randomized at the individual level to be either: 1) a male guest (their husband, boyfriend, male peer, father, or brother) or 2) a female guest (friend, mother, or sister). The random assignment of the guest took the form of a soft nudge (suggestion) at the time of invite, as there was no restriction or consequence if the woman did not bring the type of person suggested.

Implementation was carried out by *MobiCiné*, a Senegalese NGO that specializes in promoting cinema in rural areas, through mobile units that consisted of vehicles carrying projectors, generators, and screens that visited each village on a rotating basis. Each team included a screening technician and a female communication specialist for monitoring attendance and leading the post-screening discussions and workshops in T2. *MobiCiné* communication specialists underwent a one-week training with RAES and UN partners to learn how to deliver pedagogical kit material and navigate discussing sensitive topics (Le Port et al. 2022).

The intervention started in December 2019 and was meant to last five months with a total of nine film club screenings plus four workshops in the CLV + Kit arm.

However, in March 2020, the intervention was interrupted due to COVID-19 and resulting regulations, with approximately four film club sessions and two workshops (those on sexuality and sexual health and sexual violence) having taken place in each village. To continue providing participants with the *C'est la vie!* content during COVID-19, audio podcasts were delivered via mobile phone for a random fraction of villages. Within each intervention arm, villages were randomized to either “continued treatment” via podcasts (60%) or no additional activities (40%). The podcasts were an audio adaptation of season 1 of *C'est la vie!* and consisted of eight 20-minute episodes. Each episode was broadcasted in two 10-minute parts to maintain the interest of listeners. In the control arm, the placebo podcast was the series *Bouche de l'Afrique*, which were folklore stories on themes unrelated to those in *C'est la vie!*. To deliver the podcasts, facilitators from a central call center contacted study participants and if available, connected them to a platform where the podcast was transmitted.⁵ For participants in the CLV+Kit arm who were assigned to the podcasts, facilitators also engaged them in individual discussions every two weeks via mobile phone.

Figure 1 shows the flow of both implementation of the intervention and data collection points over time. Further details regarding the study design, including mapping of villages, sample size calculations, ethics, trial registration and pre-analysis plan are included in Online Appendix B.

3. Data

Survey data were collected at three points: 1) before the start of the intervention and before participants knew they would be invited to attend film clubs (baseline

⁵ A *MobiCiné* voice box platform was set up with four operational positions each under the responsibility of a facilitator who had the task of calling women to sensitize them on the podcasts, monitor the participation of women, lead a post-discussion, and send regular reminders to women who have not been able to access the platform to listen podcasts. Each episode of the podcast is posted on the platform for two weeks (one week for the first part and one week for the second part of the podcast).

survey, October to December 2019), 2) three months after the film clubs suddenly stopped due to the pandemic and before the podcasts were implemented (midline survey, June to July 2020), and 3) nine months after the film clubs stopped (endline survey, December 2020 to January 2021). The midline survey was a short mobile phone survey, as in-person data collection was not possible due to the COVID-19 related restrictions. Therefore, the midline survey only collected a subset of indicators on knowledge and attitudes, and no indicators on behaviors.⁶ The endline survey, occurred in-person and collected all indicators related to knowledge, attitudes, and behaviors across VAWG and SRH domains. In addition to the quantitative data, in-depth qualitative data was collected in March 2020 in 14 villages (stratified by region) to understand *how* and *why* impacts were achieved (or not) among the target population (Le Port et al. 2022).

Prior to the baseline survey, a census was conducted in all study villages with the objective of identifying eligible adolescent girls and young women to participate in the study. Eligibility criteria included: 1) age (14-34 years), 2) speaking and understanding the language in which the series was being shown (either Wolof or Pular, depending on the dominant language in each community), and 3) living within a two-kilometer radius of the public primary school. A random sample of 34 eligible adolescent girls and young women was selected in each village to take part in the baseline survey and intervention.

3.1 Outcomes

We examine impacts on two main *C'est la vie!* themes related to VAWG and SRH. Given the breadth of indicators collected, we create three aggregate indices

⁶ This was done for a variety of reasons. First, phone surveys are short, and thus a limited number of indicators could be collected. Knowledge and attitudes were prioritized, as the survey was immediately after the intervention occurred and many behaviors take longer to materialize. In addition, many of our key behavior outcomes were sensitive in nature (including VAWG) and would have necessitated ethical protocols that were not possible to implement within remote surveys and with uncertainty around violence-related services being accessible during the early period of the pandemic.

corresponding to domains of knowledge, attitudes and behaviors for each theme. For each theme and domain, we pre-specified outcomes based on the content of *C'est la vie!* and sought to include validated scales and (or) questions where possible. Analyzing these aggregate indices instead of individual outcomes has several advantages (Anderson 2008): first, aggregating outcomes into an index reduces the probability of a false discovery by reducing the number of distinct hypothesis tests conducted; second, an aggregate index provides a statistical test and inference for overall or aggregate impacts on a family of outcomes such as knowledge on VAWG; third, it may provide more power to detect impacts as it can reduce the random error from each individual indicator.

To create the aggregate indices, we first transform all indicators so that higher values equal more favorable outcomes (e.g., attitudes supporting freedom from IPV score higher, while attitudes condoning IPV score lower) and then standardize each indicator using the control mean and standard deviation. The indices are then simply the equally weighted average of the individual z-scores (Kling, Liebman, and Katz 2007). For indices where component indicators are missing, we replace observations with the mean by treatment arm for the individual components. In addition to the aggregate indices, we analyze individual indicators to understand which specific outcomes might be driving changes. Detailed description of individual indicators that make up the aggregate indices, including definitions and construction can be found in Table B2.

3.2 Sample and baseline balance

Figure 1 shows the composition of the sample across survey waves and treatment arms. Of the original 120 villages, village leaders in three refused to participate, thus these villages were dropped from the sample before implementation started. Baseline data were collected on 3,967 participants across 117 villages, of which we were able to re-survey 3,003 (or 76 percent) during the midline phone survey and

3,433 at endline (or 87 percent). We examine interview success rates at each period, showing that overall rates do not vary by the original treatment arms (see Table A1 in Online Appendix A). As the adolescent girls and young women in our midline survey are a select sample that have access to mobile phones and re-contact rates are substantially higher at endline, we focus on the unbalanced panel for our main analysis; however, our results are robust to also using a balanced sample of girls and young women who are surveyed in all three survey rounds.

We test for selective attrition and baseline balance across background characteristics and outcome variables for the baseline to midline panel sample (Table A2) and the baseline to endline panel sample (Table A3). The last column across both tables shows that those that attrited are different from those that stayed in the sample. However, there is little differential attrition across the treatment and control arms (columns 4 and 5). The exceptions are that in the midline sample those who attrited in the CLV arm had higher (more favorable) aggregate SRH and VAW outcomes compare to those that attrited in the control arm. However, these outcomes are still balanced across CLV and control arms for those that stayed in the sample (column 2). In the endline sample there is evidence of selective attrition with respect to age, previously watching *C'est la vie!*, household wealth, and aggregate SRH behaviors. However, only age and aggregate SRH behaviors are unbalanced across the treatment and control for those that stay in the sample (columns 2 and 3). Overall, for those that stay, we fail to reject the null on tests of joint orthogonality of baseline characteristics that compare CLV to control or CLV+kit to control.⁷

Descriptive statistics for the baseline to endline panel show that pre-intervention the sample is young (on average 22 years old) and that 34.9 percent are adolescents 14 to 19 years old. The majority of the sample are married (52

⁷ Joint orthogonality tests were performed by regressing CLV or CLV+kit on variables listed in Tables A2 and A3. P-value of joint test range from 0.15-0.54.

percent in non-polygynous and 21 percent in polygynous marriages), and about half report no formal schooling. In terms of access to television and prior exposure to *C'est la vie!*, 51.7 percent of respondents report usually watching some television and only 2 percent had watched *C'est la vie!* at baseline. Adolescent girls and young women live in relatively large households, with about 10 members on average.

4. Estimation

We structure our analysis by first investigating the impacts of *C'est la vie!* on our outcomes of interest, pooling together both the CLV and CLV+Kit arms. These models ignore the different design features, to estimate the impact of the intervention over all its cross-randomized sub-treatments. We then examine if impacts varied by different design features – the pedagogical kits, the male guest invite, and the podcasts. We estimate midline and endline outcomes separately to see how impacts change over time, and in particular if impacts were sustained nine months after film clubs ended.

Following our pre-analysis plan, to estimate the pooled impact of *C'est la vie!*, we use analysis of covariance (ANCOVA) models. The exact equation we estimate is:

$$(1) \quad Y_{fvd}^t = \alpha^t + \beta_p^t Pooled_{vd} + \gamma^t Y_{fvd}^0 + \delta^t X_{fvd}^0 + \sigma_d^0 + \varepsilon_{fvd}^t$$

Where Y_{fvd}^t is the outcome of interest for female f from village v in department d at either midline or endline (t), and Y_{fvd}^0 is the outcome of interest at baseline. The indicator $Pooled_{vd}$ equals one if village v was randomized to receive either CLV or CLV+Kit. The β_p^t represents the intent-to-treat (ITT) estimator for each time period, or the effect of being assigned to a *C'est la vie!* arm. We control for, X_{fvd}^0 , a vector of background characteristics of the female measured at baseline including age, marital status, education, household size, and wealth, as well as study design indicators for being randomized to bring a male guest and being randomized to the

podcast (endline only).⁸ We also control for department fixed effects (σ_d), which is an administrative level below region (the stratum used for randomization) to take into account film club implementation logistics.⁹

In equation 2 we separate CLV from CLV+Kit, with β_c^t and β_k^t representing the ITT estimator, or the effect of being assigned to CLV or CLV+Kit respectively:

$$(2) \quad Y_{fvd}^t = \alpha^t + \beta_c^t CLV_{vd} + \beta_k^t CLVKit_{vd} + \gamma^t Y_{fvd}^0 + \delta^t X_{fvd}^0 + \sigma_d^t + \varepsilon_{fvd}^t$$

To test whether β_c^t and β_k^t are statistically different from each other, we conduct Wald tests of equality.

Finally, in equation 3 we test whether impacts varied by whether participants were randomly assigned to invite a male or female guest. Given that this was randomized across all three treatment arms, we use equation 1 and interact the pooled treatment with an indicator for the male guest nudge ($Male_{fvd}$):

$$(3) \quad Y_{fvd}^t = \alpha^t + \beta_p^t Pooled_{vd} + \beta_M^t Male_{fvd} + \beta_{PM}^t Pooled * Male_{fvd} \\ + \gamma^t Y_{fvd}^0 + \delta^t X_{fvd}^0 + \sigma_d^t + \varepsilon_{fvd}^t$$

We run a fully interacted model where the control variables are also interacted with the male guest indicator. We estimate a similar model with the podcast extension, but only at endline, as the podcasts were implemented after the midline survey. All regressions cluster standard errors at the village level. These analyses broadly follow our pre-analysis plan for the study, with deviations detailed in Online Appendix B.

5. Results

5.1. Experience with the film clubs and podcasts

We begin by describing participants' experiences with the film clubs using monitoring data and self-reports from the endline survey. Both treatment and

⁸ The wealth index is constructed through principal component analysis containing 28 indicators representing dwelling characteristics and household durable and livestock assets following the Demographic and Health Survey methodology.

⁹ In total, there are six departments, split equally across regions.

control arms show high rates of participation in the film clubs, ranging from 89 to 92 percent using the self-report data to 87 to 90 percent using the monitoring data (Table 1). There are no significant differences across the three arms in terms of participation. Among respondents who report never participating (n=318), common reasons stated by those in the control group include being temporarily away or not in the village during screenings (34 percent), not having time or the day (time) being inconvenient (27 percent), not being informed of the day (time) (18 percent) or health reasons (11 percent) (rates are similar for treatment arms). For adolescent girls and young women who participated, the average number of sessions attended was about 3.5 according to self-reports (and slightly lower according to the monitoring data). Given that on average 4.5 sessions were implemented before COVID-19 forced film club closure, participants attended about 75 percent (or 65 percent using monitoring data) of total implemented screenings. Among those that attended, most (65 to 75 percent according to monitoring data) brought a guest and about a quarter brought a male guest.

While participation data is in general similar across the three arms, differences emerge in terms of participant experience. Most participants talked to family and friends about the series, and this was significantly more common in the CLV+Kit arm compared to the control arm (77 percent versus 66 percent). Love of the series was nearly universal, with over 90 percent reporting they like the films very much (the highest choice on a five-point scale) and rates were higher among the CLV treatment arms compared to the control arm. Participants also reported a high degree of “transportation” with over 70 percent of the sample agreeing with four out of five statements related to imagery, emotional response, and focus (e.g., “I can imagine myself as part of the story,” “It affects me emotionally,” “I think the story has changed my life”). Participants in the treatment arms were significantly more likely to report that the series affected them emotionally or changed their life compared to the control arm.

We report similar descriptives on participation for the subsample of villages who were randomized to receive the podcast (Table A4). We see a difference between the self-reported rates of participation and the monitoring rates, with 52-61 percent of adolescent girls and young women reporting participating in a podcast, while the monitoring data reports 70-86 percent. In terms of the number of times participants listened to podcasts, the average is about 2.5 according to self-reports or between 5 and 6.4 according to the monitoring data. This equates to listening rates of on average 38 percent out of the 16 total scheduled podcasts. According to the monitoring data, participation varied by treatment status, with women in the CLV and CLV+Kit arms being significantly more likely to participate compared to the control arm.

5.2 Impacts of C'est la vie!

Table 2 presents the impacts on VAWG of being randomized to the *C'est la vie!* intervention for the pooled treatment (panel A) and separated by treatment arm (panel B). The first two columns show impacts on VAWG knowledge and attitudes from the midline survey measured approximately three months after the film clubs ended, and the last three columns are VAWG impacts at endline, approximately nine months after film clubs ended. Being randomized to *C'est la vie!* improves VAWG knowledge at midline by 0.281 standard deviations (SD), however these impacts disappear by endline. In contrast, no impacts on VAWG attitudes are seen at midline, however by endline, exposure to *C'est la vie!* significantly improves attitudes by 0.128 SDs. We find no impacts of the pooled treatment on VAWG behaviors measured at endline. Impacts across all outcomes do not differ by treatment arms, revealing that adding the pedagogical kits does not lead to larger impacts (panel B).

Table A5 presents the results on the individual indicators that comprise the VAWG aggregate for the midline and endline surveys, to understand what themes

drive impacts on overall effects. Impacts on VAWG knowledge at midline accrue from all three indicators that make up the aggregate index, correctly naming adverse consequences for child marriage (0.222 SDs), FGM (0.152 SDs) and IPV (0.250 SDs). By endline these impacts have faded for all three indicators. For VAWG attitudes, impacts at midline are only significant for one out of five indicators (attitudes towards child marriage), but by endline there are significant impacts on three out of seven indicators. In particular, we find significant improvements in beliefs that the youngest acceptable and ideal age of marriage for girls and women is 18 or above (0.103 – 0.111 SDs). We also find significant improvements in attitudes rejecting FGM (0.106 SDs), and attitudes rejecting IPV (CLV+Kit arm only). Counterintuitively, we find adverse effects on emotional and sexual IPV ranging from 0.072 to 0.111 SDs (negative coefficient indicates a reduction in freedom from IPV). Given significant improvements in IPV attitudes, it is plausible that the adverse impacts on emotional and sexual IPV are due to other factors, including increased awareness of what constitutes violence, rather than increases in underlying behaviors. We return to this possibility in the discussion. *C'est la vie!* also significantly increases freedom from FGM among daughters of participating women (0.094 SDs), consistent with the significant improvements in attitudes against FGM.

Table 3 presents results on SRH outcomes at midline and at endline. Similar to the VAWG results, we find that being randomized to *C'est la vie!* improves SRH knowledge at midline by 0.174 SD, but these impacts fade by endline (Panel A). Midline impacts on SRH knowledge are not significantly different by treatment arms, again revealing that the pedagogical kits did not lead to larger impacts (Panel B). We find no other impacts on SRH attitudes or behaviors. Looking at the individual indicators that make up the aggregates, we find that at midline being randomized to *C'est la vie!* improved knowledge on all three indicators related to contraceptive methods (0.164 SDs), HIV prevention (0.144 SDs), and HIV

prevention (0.135 SDs, the latter only in the CLV only treatment arm), but these impacts faded by endline (Table A6). We find few other impacts on individual SRH indicators at endline, the exceptions are improved knowledge on where to get family planning in the CLV+Kit arm (0.092 SDs, which is significantly different from CLV arm), and marginally significant negative impacts on HIV transmission knowledge (-0.069, only in the CLV arm). We caution in over-interpreting the results of individual indicators, as some may be significant due to chance alone.

We check the robustness of our results to alternative specifications. First, Tables A7 and A8 replicate these results for unadjusted models (with only baseline values and department fixed effects), showing very similar impacts, with slightly lower precision. Second, to ensure that differences in impact across the midline phone survey and the endline survey are not due to differences in the sample of adolescent girls and young women who were interviewed, we estimate equations (1) and (2) on a balanced sample of participants who were interviewed across all three rounds. Tables A9 and A10 reveal that results are similar in the balanced sample, with minor differences in magnitude of coefficients. Third, for many outcomes, including attitudinal measures, responses may be subject to social desirability bias. Following previous research, we run a robustness check, interacting pooled treatment with a score of social desirability using 10 items derived from the Marlowe Crowne scale, where higher values equate to greater propensity to give socially desirable answers (Dhar, Jain, and Jayachandran 2022). We find no heterogeneous impacts by social desirability on VAWG outcomes, indicating no evidence of bias for these outcomes (Table A11). However, for SRH, we find evidence that respondents with higher social desirability are more likely to give favorable responses on endline attitudes. This is not an outcome where we find overall impacts, nonetheless is a useful cautionary finding. Finally, following our pre-analysis plan, we also estimate treatment-on-the-treated (TOT) effects to explore if take-up and intensity of treatment matters. We implement an instrumental

variable approach predicting any participation (using monitoring data) and ‘high participation’ (defined as attending three or more screenings) using the exogenous village-level randomization to *C’est la vie!* pooled treatment. Tables A12 and A13 show results align with expectations, showing impacts are larger in magnitude.

5.3 Impacts by male nudge and podcasts

We next test for heterogeneous impacts of the pooled treatment by whether adolescent girls and young women were randomly encouraged to bring a male guest and by whether villages were randomized to continue the intervention via podcasts. Table 4 reveals no evidence of differential impacts by male guest (Panel A) or podcast (Panel B) on VAWG aggregates. In contrast, Table 5 reveals that the male nudge (panel A) leads to significantly larger impacts on SRH knowledge by 0.167 SDs at midline and by 0.077 SDs at endline compared to the female nudge. However, there are no other differential impacts on other SRH outcomes by the male nudge or the podcast extension.

Weak and null results by male invitation and the podcast extension may reflect the lower take-up of these design features. For example, although the group nudged to bring a male guest accounted for nearly all male guests, their attendance may have not been regular enough to promote meaningful engagement and change. According to monitoring data, 50 percent of the participants in the male nudge group attended at least once with a male guest, however self-reports show that the majority guests were not husbands or partners (Table 1). In addition, as previously discussed the take-up of podcasts was lower than we anticipated, in part due to logistical and implementation challenges.

6. Potential pathways and heterogeneity

6.1 Qualitative evidence

Qualitative data collected through individual interviews and focus group discussions provide evidence of the pathways to behavioral change related to

observational learning and interpersonal dialogue (Le Port et al. 2022). Participants reported feeling enlightened and motivated by the narratives in the series and shared the story and lessons with family and friends. In particular, participants unanimously said the series “raised their awareness” of interesting and important topics for adolescent girls and young women, helping them “live better.” The topics mentioned in conversations included, but were not limited to, themes of marriage and domestic life, IPV and pregnancy risks, family planning, abortion, and how to react in the case of sexual violence. Participants also mentioned how the content helped them make the right choices in life and enabled them to advise others, especially younger women who were not as familiar with themes of marriage and childbirth.

The power of observational learning (Bandura 2001) is well demonstrated in the following quote:

"It's the series. Because it's through the show that you understand what's going on in the world. For teenagers, it's by watching the show that they will understand the problems of a 15-year-old girl who is married and pregnant. You can always talk to them, but by watching the show, the images, they will realize that it's real and they will be careful.."

~Individual interview, married woman in Kolda (CLV+Kit)

The main pathway identified as a form of social mediation was interpersonal dialogue (Papa and Singhal 2009). Participants recalled sharing and discussing information with others, including their families and co-wives or mothers-in-law specifically:

"My family thinks it's good to attend, because it teaches the girls so many things. After each screening, I tell them about everything we saw and each of them gives their opinion." ~Individual interview, unmarried adolescent girl, Kaolack (CLV)

Although we find that *C'est la vie!* improved knowledge in the short-term, likely strengthened in part through observational learning and discussion, evidence of changes in attitudes and norms were less clear cut in qualitative narratives—with some themes showing consistent narratives of shifts due to the series, and others no change. Child marriage was a theme where shifts were consistently mentioned by adolescent girls and women, whereas there were few attitudinal or norm changes around IPV or FGM. In some cases, this lack of change was attributed to adherence to longstanding religious or cultural beliefs:

“At my level the series has changed my outlook, because before I thought you could marry me very young, but now I know that is not a good thing. The program has not changed my opinion on FGM, I still believe that FGM is something important for a girl and that it helps to have no problem when married.” ~Individual interview, unmarried adolescent, Kaolack (CLV+Kit)

As illustrated above, individual attitudes can be changed by interventions such as *C'est la vie!*, but the potential is likely to vary based on the extent to which particular social norms are entrenched in society.

6.2 Transportation effects

The power of edutainment to affect attitudes and behavior is in part mediated by its ability to transport individuals (Green, 2021). Individuals who are more immersed in the storyline are more likely to change their beliefs, attitudes and behaviors (Banerjee, La Ferrara, et al., 2019b; Green & Brock, 2000). Using items from the transportation scale developed by Green and Brock (2000) and reported in Table 1, we construct a transportation index (see Table B2) and investigate whether individuals who are more transported by *C'est la vie!* exhibited larger improvements in knowledge, attitudes, and behaviors related to VAWG and SRH. We first present correlates of transportation among the treatment group (Table

A14)¹⁰ and find that never having married (as compared to married in a non-polygamous marriage) and living in a wealthier household are negatively correlated with both transportation indicators. We then estimate pooled treatment impacts disaggregated by whether the adolescent girl or young woman was in the high transportation tercile or the lower two terciles (Table 6). Results indicate that those who are more transported by the *C'est la vie!* storyline have larger improvements on VAWG and SRH aggregates as compared to those in the bottom two terciles (although this is not significantly different for attitudinal measures). We also find that those who are more transported report adverse impacts on VAWG behaviors. We hypothesize the same dynamic driving reporting of adverse impacts on individual IPV indicators may be also occurring here. Women and girls who are more absorbed in the series are also those who may update their perceptions of what constitutes IPV. While these results cannot be interpreted in a causal way, as factors determining transportation are endogenous, they show that engagement in the series and content may be an important mediator of impacts.

6.3 Heterogeneity

The target sample of adolescent girls and young women is a diverse demographic. We hypothesize that the salience of themes may be stronger among those who are in similar situations, allowing them to better identify with characters. For example, adolescent girls and young women who are partnered may have stronger reactions to narratives around IPV or family planning decisions. Likewise, adolescent girls who are facing marriage possibilities, may have stronger reactions to narratives on child marriage or early pregnancy risks. To investigate these possibilities, we look at heterogeneity of impacts, by marital status as specified in the pre-analysis plan.

¹⁰ We also measured transportation among the placebo control group, however, as the series was different, the characteristics that correlate with transportation are likely to be different for the treatment and control arms.

In addition, previous research has hypothesized that impacts on attitudes may vary by the degree to which viewers conform to social norms, or their degree of self-direction, which may determine how malleable their attitudes and behaviors are in response to edutainment (Banerjee, La Ferrara, and Orozco 2019b). We collect a series of questions following previous studies to create scales of “conformity” and “self-direction” to test these theories (see Table B2 for more information on index construction).

The results of these analyses are reported in Table 7 for VAWG outcomes and Table 8 for SRH, and reveal little evidence of heterogeneity. The only exception is a statistically significantly larger effect on midline SRH attitudes (0.256 SDs) among the never married sample (as compared to the married sample), but no other significant differences by marital status (Panel A), conformity (Panel B) or self-direction (Panel C). Nonetheless, we caution in over-interpreting these results, as the power requirements for interactions of this type are substantially higher as compared to the main analyses.

7. Discussion and conclusion

We evaluate whether *C’est la vie!*, a popular West African edutainment television series, improves adolescent girls and young women’s knowledge, attitudes and behaviors with respect to VAWG and SRH in rural Senegal. The evaluation period included the onset of the COVI-19 pandemic, resulting in a more limited exposure (on average 4.5 film club sessions), than the nine sessions originally planned. We find that at midline, *C’est la vie!* increases knowledge on VAWG and SRH, but attitudes are unchanged. These knowledge gains disappear by endline, while significant improvements in VAWG attitudes and norms emerge, driven by improvements in attitudes on child marriage and FGM. We find no impacts on aggregate behaviors, which indicates that gains in knowledge and attitudes are not sufficient to change behavior, at least not within the context of rural Senegal. In

general, we find no additional effects of design variations tested, including the pedagogical kits, male guest invite, or the podcast implemented during COVID-19. The notable exception is that gains in SRH knowledge are larger when participants are nudged to bring a male guest as opposed to female guest.

Our findings have several implications for program design and future research. First, we find that the pedagogical kits (adapted to be 30-45 minutes post-screening discussions and 1.5 hour workshops) did not generally enhance or lead to additional impacts. In other words, gains in knowledge and attitudes came from viewing the television series, rather than from structured discussions and workshops. While other edutainment interventions on similar topics have included facilitated discussions, our study is unique in being able to isolate the additional impact of these activities (Cassidy et al. 2022; Orozco-Olvera and Rascon-Ramirez 2022). The lack of additional impact could be because participants were widely discussing themes and the storyline with friends and family informally, outside of intervention activities, thus facilitated discussions did not add new information or reinforce opinions above and beyond those occurring in both treatment arms. Another possibility is that facilitated discussions did not sufficiently present new norms or contradict group beliefs or attitudes to trigger change beyond those already presented in the series.

Second, we find that in general, inviting a male guest instead of a female guest did not lead to differential impacts. Similar to pedagogical kits, this may be because dialogue with men was already occurring regardless of the soft nudge. Alternatively, as noted earlier, descriptive evidence suggests nudges may not have been enough to actively engage men or change the dialogue. A companion process evaluation reveals that our attempt to jointly engage men and boys in *C'est la vie!* and related activities may have been limited by the view that the series content was composed of 'women's topics' and film clubs were 'for women' (Le Port et al. 2022). Thus, even when men attended, they were likely to be the minority and were

unlikely to return for future sessions. In contrast to our findings, evidence from other contexts shows that who participates and whether edutainment is delivered in a group setting can affect impacts. For example, in Pakistan, prevalence of child marriage shows the most robust reductions up to 18 months later when both women and men participate in a mobile cinema screening of a street-theater performance along with facilitated discussions, as opposed to targeting only women or only men (Cassidy et al. 2022). In Mexico, participants exposed to an audio soap opera via community meetings or centrally located loudspeakers showed an increase in the belief that VAW is a problem in their community and higher rates of normative beliefs that their community members reject VAW, while those who listen to the same content individually showed no impacts (Arias 2019).

Third, we find that impacts evolve over the time frame of the evaluation. Impacts on knowledge fade while impacts on VAWG attitudes become significant over time. This means that interventions may need to plan for longer timelines that include sustained viewings (and repeated messaging) so that impacts do not fade rapidly, while for researchers this means ensuring repeated measurement of outcomes over the medium or longer-terms. Few studies on edutainment focusing on similar topics have measured results over the long-term, which may be particularly important for social norm diffusion and behavior change. For example, while numerous studies show immediate knowledge or attitudinal change, the dosage or intensity needed to sustain changes are unclear (Donati, Orozco-Olvera, and Rao 2022; D. Green et al. 2022). In one of the few long-term and intensely-implemented edutainment evaluations, women in villages covered by an Egyptian anti-FGM radio campaign *Al-Rabat El-Byout*, aired daily for five minutes each morning over 11 years, showed reduced likelihood of being cut by 12-13 percentage points (Khalifa 2022). With edutainment interventions being increasingly designed as short clips, documentaries or social media advertisements, ranging from 10 to 30

minutes, questions remain as to the efficacy and sustainability of approaches across contexts.

Lastly, impacts on knowledge and other outcomes may depend on how transported viewers are by the storyline, highlighting the importance of the production phase in generating a content that will absorb and captivate viewers. Few studies have explicitly tested emotional responses to storylines, however many evaluated interventions were developed based on formative research, using context-specific actors, storylines and languages. Increasingly, interventions also include components meant to stimulate interaction, for example, participatory theater (Hoff, Jalan, and Santra 2021), interactive gamified chatbots (De Filippo et al. 2022) or web-based interactive learning modules (Yount et al. 2022). Some evidence shows that this built-in engagement pays off. In a test comparing WhatsApp-based gamified chatbots to an audio-drama focused on IPV in South Africa, young women reported more favorable attitudes regarding healthy relationships and a 7 percentage point reduction in the experience of IPV only in the gamified arm (De Filippo et al. 2022). Further, viewers who indicate they occasionally “thought about” characters or who remembered specific facts about them reported lower support for IPV, however similar to our analysis, this cannot be taken as causal (Banerjee, La Ferrara, and Orozco 2019a).

There are limitations to this study, including challenges in implementation due to the COVID-19 pandemic, which shortened the target group’s exposure to the intervention. However, even with these disruptions, the average number of screenings of *C’est la vie!* was equal to 6.75 hours of content (4.5 screenings of approximately 75 minutes each), which is in line with other edutainment interventions that have resulted in meaningful impacts. For example, MTV’s Shuga series was a total of three hours exposure and the radio series in Tanzania which changed attitudes and norms around child marriage was just under two hours of content (Banerjee, La Ferrara, and Orozco 2019b; Green et al. 2022). However,

these series differed from *C'est la vie!* in that they were focused primarily on one thematic area (e.g., HIV and risky sex or child marriage) delivered over one or two sessions, while *C'est la vie!* aimed to change a wide range of themes through a prolonged engagement and repeated viewing. Thus the disruption of COVID-19 meant that not all themes were repeated and not all storylines came to a conclusion. In addition, while overall take-up of the intervention was high, average attendance by participants at any given screening ranged from 40 to 70 percent. Therefore, adolescent girls and women may not have gotten the intensive messaging and exposure needed to change behaviors (Le Port et al. 2022). The intensity of the complementary pedagogical kit activities were also condensed for implementation, potentially reducing their efficacy.

One unanswered question from our findings is how to interpret the adverse effects on individual indicators of emotional and sexual IPV. A direct interpretation is that the series is increasing incidence of IPV, however this contradicts general findings on increased knowledge around adverse consequences of IPV and more favorable attitudes on VAWG. There are several alternative hypotheses which we investigate with quantitative and qualitative data. First, there is a possibility that exposure to *C'est la vie!* could have led to participants being more willing to report violence to enumerators, either due to reduced stigma, shame or internalization of blame for the abuse. Second, there is a possibility that *C'est la vie!* may have changed participants awareness of what constitutes abuse in the first place. This could be particularly the case for sexual IPV, as sex within marriage is often seen as a man's right and a woman's duty in Senegal.

We explore the first alternative by interacting the social desirability scale with treatment and estimating impacts on individual IPV outcomes, as well as interacting a second indicator of whether or not questions on IPV were asked directly by

enumerators or self-completed on tablets at endline (Peterman et al. 2023).¹¹ In neither case are interaction terms significant, indicating there is no quantitative evidence that stigma, shame and social desirability drives effects (results available upon request). We next review qualitative transcripts from the process evaluation to explore support for the second alternative hypothesis, finding some evidence of increased awareness of what constitutes abuse as well as evidence for increased disclosure. For example, there were multiple accounts in focus group discussions of participants in both regions stating they had expanded views on what constitutes violence: *“All of these are forms of rape and sleeping with a woman without her consent is also a rape. Rape comes in many forms . . . I did not realize these were rape, but now I know”* and *“On the subject of violence, many of us didn't know what we'd been taught, such as the fact that excision is a form of violence, or that tapping a person passing is a form of violence, etc. That's something people like me didn't know, and the boys don't know because many of them do it.”* There were also multiple accounts of increased disclosure, such as *“Yes, I learned new things from the series, like the fact that a victim of rape should not keep it a secret because it could harm them, cause a serious illness. You need to talk to a trustworthy friend about it.”* While these quotes provide only suggestive evidence, it also aligns with previous edutainment evaluations of a radio program in Nepal and a documentary in Tanzania which found changes in IPV, attributed to changes in reporting, rather than backlash effects (Clark et al. 2020; Leyaro, Selaya, and Trifkovic 2021). In our case, the qualitative evidence also shows no narratives of adverse (or beneficial changes) with respect to IPV behaviors, further supporting the hypotheses around increased awareness or reporting.

¹¹ At endline, participants were randomized to either be interviewed face-to-face by female enumerators or complete audio computer assisted self-interviews meant to increase privacy and reduce potential stigma and shame attached to responses. Results of this experiment are available elsewhere, showing private interviews led to increases in reporting of 4-7 percentage points for IPV outcomes (Peterman et al. 2023).

Overall, our findings contribute to a quickly growing literature on edutainment by demonstrating that an edutainment television series implemented in rural areas is a promising strategy for improving short-term VAWG and SRH knowledge and medium-term VAWG attitudes among adolescent girls and young women. However, our study also points to the need to better understand how to ensure impacts are sustained over time and how to produce edutainment content that will ultimately change behaviors. Options for design and implementation features that engage participants, spread social norms, and lead to behavior change are increasingly diverse with innovation in digital spaces and the spread of social media into rural areas. Yet, we still do not know how to leverage these new platforms for positive behavior change (and not reinforce bad behaviors). Moreover, there may be barriers to their implementation and uptake that should be explored alongside impact evaluations. A key area for future research is capturing impacts in real-world scenarios across different platforms and understanding transferability of impacts over broader geographic areas and cultures.

8. References

- About, Frances E., and Daisy R. Singla. 2012. "Challenges to Changing Health Behaviours in Developing Countries: A Critical Overview." *Social Science & Medicine*, Part Special Issue: Challenges to changing health behaviours in developing countries, 75 (4): 589–94.
- Anderson, Michael L. 2008. "Multiple Inference and Gender Differences in the Effects of Early Intervention: A Reevaluation of the Abecedarian, Perry Preschool, and Early Training Projects." *Journal of the American Statistical Association* 103: 1481–95.
- ANSD, and ICF. 2020. "Senegal: Enquête Démographique et de Santé Continue (EDS- Continue) 2019," November.
- Arias, Eric. 2019. "How Does Media Influence Social Norms? Experimental Evidence on the Role of Common Knowledge." *Political Science Research and Methods* 7 (3): 561–78.
- Bandura, Albert. 2001. "Social Cognitive Theory of Mass Communication." *Media Psychology* 3 (3): 265–99. https://doi.org/10.1207/S1532785XMEP0303_03.

- . 2004. “Social Cognitive Theory for Personal and Social Change by Enabling Media.” In *Entertainment-Education and Social Change: History, Research, and Practice*, 75–96. LEA’s Communication Series. Mahwah, NJ, US: Lawrence Erlbaum Associates Publishers.
- Banerjee, Abhijit, Eliana La Ferrara, and Victor Orozco. 2019a. “Entertainment, Education, and Attitudes Toward Domestic Violence.” *AEA Papers and Proceedings* 109 (May): 133–37.
- Banerjee, Abhijit, Eliana La Ferrara, and Victor H. Orozco. 2019b. “The Entertaining Way to Behavioral Change: Fighting HIV with MTV.” Working Paper. Working Paper Series. National Bureau of Economic Research.
- Birdthistle, Isolde, Sarah Mulwa, Sophie Sarrassat, Venetia Baker, David Khanyile, Dominique O’Donnell, Cherie Cawood, and Simon Cousens. 2022. “Effects of a Multimedia Campaign on HIV Self-Testing and PrEP Outcomes among Young People in South Africa: A Mixed-Methods Impact Evaluation of ‘MTV Shuga Down South.’” *BMJ Global Health* 7 (4): e007641.
- Cassidy, Rachel, Anaya Dam, Wendy Janssens, Umair Kiani, and Karlijn Morsink. 2022. “Father of the Bride, or Steel Magnolias? Targeting Men, Women or Both to Reduce Child Marriage,” 48.
- Christia, Fotini, Horacio Larreguy, Norhan Muhab, and Elizabeth Parker-Magyar. 2022. “Can Media Campaigns Empower Women Facing Gender-Based Violence amid COVID-19?” Preprint.
- Clark, Cari Jo, Binita Shrestha, Gemma Ferguson, Prabin Nanicha Shrestha, Collin Calvert, Jhumka Gupta, Brian Batayeh, Irina Bergenfeld, and J. Michael Oakes. 2020. “Impact of the Change Starts at Home Trial on Women’s Experience of Intimate Partner Violence in Nepal.” *SSM - Population Health* 10 (April): 100530.
- De Filippo, Alexandra, Paloma Bellatin, Tietz, Neville, Grant, Eli, Whitefield, Alexander, Puseletso, Nkopane, Devereux, Camilla, Crawford, Kaitlyn, Vermeulen, Benjamin, and Hatcher, Abigail. 2022. “Effects of Digital Chatbot on Gender Beliefs and Exposure to Intimate Partner Violence among Young Women in South Africa.”
- Dhar, Diva, Tarun Jain, and Seema Jayachandran. 2022. “Reshaping Adolescents’ Gender Attitudes: Evidence from a School-Based Experiment in India.” *American Economic Review* 112 (3): 899–927.
- Donati, Dante, Victor Orozco-Olvera, and Nandan Rao. 2022. *Using Social Media to Change Gender Norms: An Experiment within Facebook Messenger in India*. Policy Research Working Papers. The World Bank.
- Glennester, Rachel, Joanna Murray, and Victor Poulouen. 2022. “The Media or the Message? Experimental Evidence on Mass Media and Modern Contraception Uptake in Burkina Faso.” Working Paper.

- Green, Donald, Dylan W. Groves, Constantine Manda, Beatrice Montano, and Bardia Rahmani. 2022. "A Radio Drama's Effects on Attitudes Toward Early and Forced Marriage: Results From a Field Experiment in Rural Tanzania." *Comparative Political Studies*, December, 00104140221139385.
- Green, Donald, Anna M. Wilke, and Jasper Cooper. 2020. "Countering Violence Against Women by Encouraging Disclosure: A Mass Media Experiment in Rural Uganda." *Comparative Political Studies* 53 (14): 2283–2320.
- Green, Melanie C. 2021. "Transportation into Narrative Worlds." In *Entertainment-Education Behind the Scenes: Case Studies for Theory and Practice*, edited by Lauren B. Frank and Paul Falzone, 87–101. Cham: Springer International Publishing.
- Green, Melanie C., and Timothy C. Brock. 2000. "The Role of Transportation in the Persuasiveness of Public Narratives." *Journal of Personality and Social Psychology* 79: 701–21.
- Hoff, Karla, Jyotsna Jalan, and Sattwik Santra. 2021. *Participatory Theater Empowers Women: Evidence from India*. Policy Research Working Papers. The World Bank.
- Khalifa, Suzanna. 2022. "Female Genital Cutting and Bride Price," 90.
- Kling, Jeffrey R., Jeffrey B. Liebman, and Lawrence F. Katz. 2007. "Experimental Analysis of Neighborhood Effects." *ECONOMETRICA* 75 (1): 83–119.
- La Ferrara, Eliana. 2016. "Mass Media and Social Change: Can We Use Television to Fight Poverty?" *Journal of the European Economic Association* 14 (4): 791–827.
- Le Port, Agnes, Moustapha Seye, Jessica Heckert, Amber Peterman, Annick Nganya Tchamwa, Malick Dione, Abdou Salam Fall, and Melissa Hidrobo. 2022. "A Community Edutainment Intervention for Gender-Based Violence, Sexual and Reproductive Health, and Maternal and Child Health in Rural Senegal: A Process Evaluation." *BMC Public Health* 22 (1): 1165.
- Leyaro, Vincent, Pablo Selaya, and Neda Trifkovic. 2021. "The Effectiveness of Documentary Films to Reduce Violence against Women: Experimental Evidence from Tanzania."
- Michaels-Igbokwe, C., Abramsky, T., Devries, K., Michau, L., Musuya, T., and Watts, C. 2016. Cost and cost-effectiveness analysis of a community mobilization intervention to reduce intimate partner violence in Kampala, Uganda. *BMC Public Health*. 16(196).
- Orozco-Olvera, Victor, and Ericka G. Rascon-Ramirez. 2022. "Improving Enrollment and Learning Through Videos and Mobiles: Experimental Evidence from Northern Nigeria." SSRN Scholarly Paper.
- Orozco-Olvera, Victor, Fuyuan Shen, and Lucie Cluver. 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.
- Papa, Michael J., and Arvind Singhal. 2009. “How Entertainment-Education Programmes Promote Dialogue in Support of Social Change.” *Journal of Creative Communications* 4 (3): 185–208.
- Perrin, Nancy, Mendy Marsh, Amber Clough, Amelie Desgropes, Clement Yope Phanuel, Ali Abdi, Francesco Kaburu, et al. 2019. “Social Norms and Beliefs about Gender Based Violence Scale: A Measure for Use with Gender Based Violence Prevention Programs in Low-Resource and Humanitarian Settings.” *Conflict and Health* 13 (1): 6.
- Peterman, Amber, Malick Dione, Agnès Le Port, Justine Briaux, Fatma Lamesse, and Melissa Hidrobo. 2023. “Disclosure of Violence against Women and Girls in Senegal.” International Food Policy Research Institute (IFPRI).
- Sood, Suruchi, Amy H. Riley, and Kristine C. Alarcon. 2017. “Entertainment-Education and Health and Risk Messaging.” Oxford Research Encyclopedia of Communication. May 24, 2017.
- Wakefield, Melanie A., Barbara Loken, and Robert C. Hornik. 2010. “Use of Mass Media Campaigns to Change Health Behaviour.” *The Lancet* 376 (9748): 1261–71.
- Wang, Hua, and Arvind Singhal. 2021. “Mind the Gap! Confronting the Challenges of Translational Communication Research in Entertainment-Education.” In , 223–42.
- World Health Organization. 2001. “Putting Women First: Ethical and Safety Recommendations for Research on Domestic Violence against Women.” WHO/FCH/GWH/01.1. World Health Organization.
- . 2016. *Ethical and Safety Recommendations for Intervention Research on Violence against Women: Building on Lessons from the WHO Publication Putting Women First: Ethical and Safety Recommendations for Research on Domestic Violence against Women*. Geneva: World Health Organization.
- Yount, Kathryn Mary, Yuk Fai Cheong, Irina Bergenfeld, Quach Thu Trang, Jessica M Sales, Yiman Li, and Tran Hung Minh. 2022. “Impacts of A Web-Based Social-Norms Edutainment Program on Sexually Violent Behavior and Bystander Behavior among University Men in Vietnam: The GlobalConsent Randomized Controlled Trial.” *JMIR Public Health and Surveillance* pre-print.

Figures and tables in text

Figure 1. Flow chart describing the timeline and progression of the study population

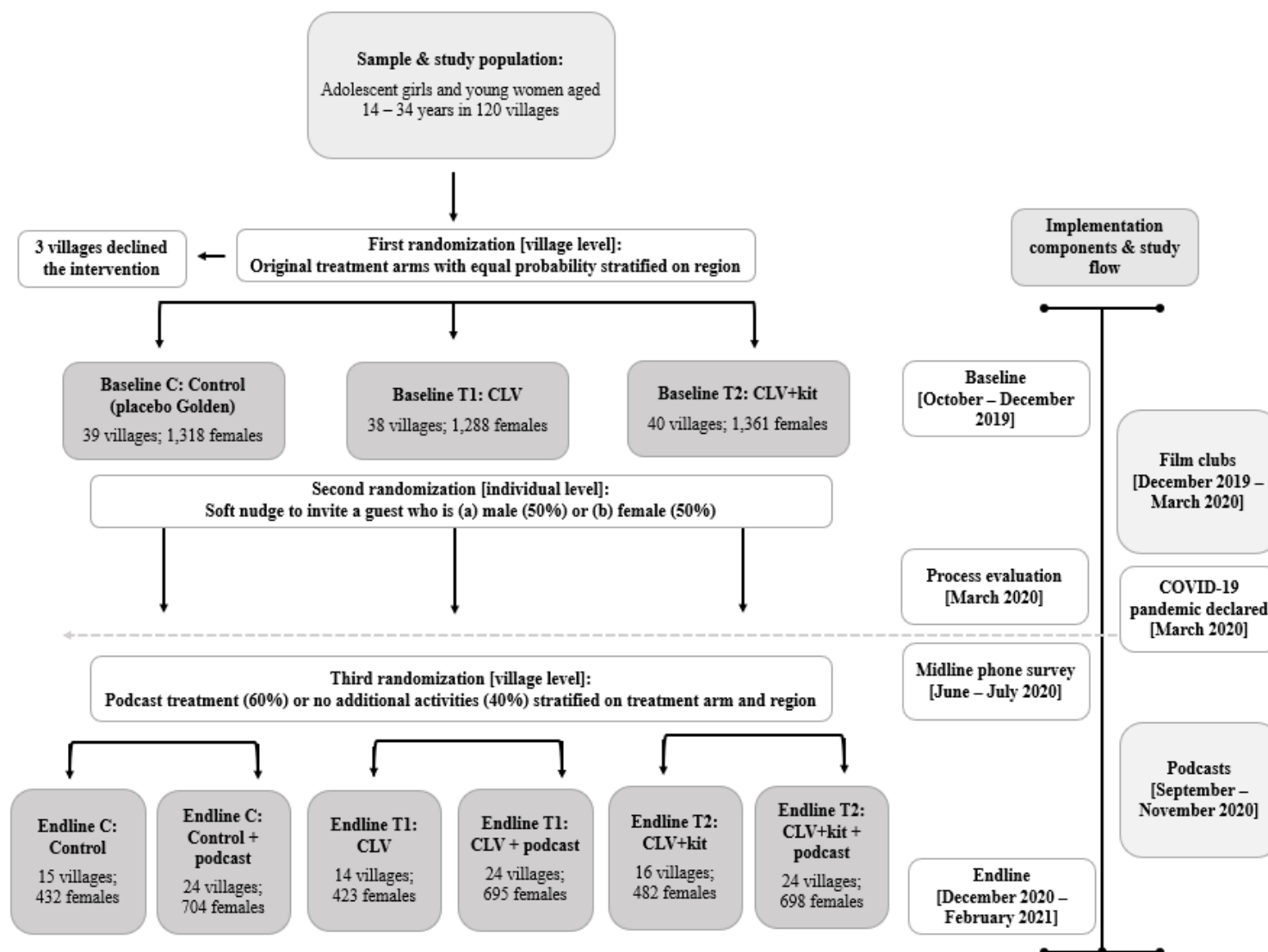


Table 1: Experience with film clubs by original treatment arm, endline survey

	N	Control (C)	Means C'est la vie (T1)	C'est la vie + kit (T2)	P-value from difference		
					T1-C	T2-C	T2-T1
Participated in the film club	3,433	0.890	0.916	0.916	0.173	0.137	0.987
Participated in the film club (monitoring)	3,433	0.868	0.898	0.890	0.228	0.403	0.718
Reason not participated: Not interested	318	0.048	0.011	0.010	0.223	0.212	0.971
Reason not participated: No time/not convenient	318	0.272	0.277	0.303	0.952	0.639	0.718
Reason not participated: Too far away/travel time to long	318	0.024	0.011	0.020	0.439	0.847	0.587
Reason not participated: Temporarily away or not in village	318	0.344	0.383	0.343	0.594	0.994	0.574
Reason not participated: Not permitted to attend	318	0.032	0.011	0.051	0.263	0.452	0.066
Reason not participated: Not informed of the time/no information	318	0.176	0.213	0.162	0.461	0.729	0.273
Reason not participated: Health reasons	318	0.112	0.096	0.131	0.697	0.696	0.481
Reason not participated: Other reason	318	0.176	0.160	0.232	0.751	0.387	0.261
Times participated in screenings (1-6)	3,115	3.443	3.424	3.580	0.908	0.399	0.352
Times participated in screenings (1-6, monitoring)	3,039	2.756	2.601	2.936	0.373	0.351	0.066
Number of screenings implemented (village level)	3,433	4.335	4.142	4.519	0.492	0.513	0.207
Percentage of screenings attended (monitoring)	3,040	0.643	0.653	0.657	0.782	0.684	0.899
Ever attended with someone she personally invited	3,115	0.746	0.771	0.772	0.391	0.309	0.964
Ever attended with someone she personally invited (monitoring)	3,040	0.650	0.704	0.753	0.377	0.070	0.400
Ever invited a male guest (monitoring)	3,040	0.223	0.264	0.266	0.280	0.215	0.956
Attended with: Parent or guardian	3,115	0.022	0.027	0.022	0.408	0.947	0.448
Attended with: Husband, partner or boyfriend	3,115	0.037	0.018	0.031	0.013	0.466	0.053
Attended with: Sibling	3,115	0.072	0.081	0.090	0.563	0.235	0.610
Attended with: Other type of household member	3,115	0.340	0.370	0.338	0.396	0.936	0.329
Attended with: Friend	3,115	0.244	0.250	0.251	0.833	0.811	0.987
Attended with: Other non-household member	3,115	0.125	0.147	0.146	0.336	0.306	0.985
Talked to family, friends or others about the film	3,115	0.678	0.734	0.765	0.109	0.014	0.272
Liked the film a lot (5 on 5 point scale)	3,115	0.903	0.946	0.944	0.010	0.014	0.889
Can imagine myself as part of the story	3,115	0.713	0.813	0.753	0.001	0.166	0.018
I want to know how the story ends	3,115	0.957	0.972	0.974	0.196	0.103	0.768
It affects me emotionally	3,115	0.855	0.914	0.930	0.015	0.000	0.434
I think the story has changed my life	3,115	0.730	0.814	0.815	0.003	0.001	0.975
I feel like I experienced the same thing as the characters	3,115	0.460	0.496	0.475	0.174	0.554	0.458

Notes: P-values are reported from Wald tests on the equality of means of control and each treatment for each variable. Standard errors are clustered at the village level.

Table 2: Impacts of treatment on aggregate VAWG z-scores

Panel A	Midline survey		Endline survey		
	VAWG Knowledge	VAWG Attitudes	VAWG Knowledge	VAWG Attitudes	VAWG Behaviors
Pooled treatment	0.281 (0.109)**	0.028 (0.082)	0.030 (0.068)	0.128 (0.051)**	-0.033 (0.046)
R^2	0.19	0.17	0.09	0.16	0.11
N	3,003	3,003	3,433	3,433	3,422
Panel B					
Treatment 1: CLV	0.303 (0.130)**	-0.027 (0.086)	-0.026 (0.081)	0.102 (0.054)*	0.004 (0.051)
Treatment 2: CLV+Kit	0.259 (0.125)**	0.083 (0.097)	0.087 (0.077)	0.154 (0.057)***	-0.072 (0.053)
R^2	0.19	0.17	0.09	0.16	0.11
N	3,003	3,003	3,433	3,433	3,422
F test: CLV = CLV+Kit	0.11	1.68	1.91	1.33	2.37
P-value	0.74	0.20	0.17	0.25	0.13

Notes: Standard errors in parenthesis clustered at the village level. * $p < 0.1$ ** $p < 0.05$; *** $p < 0.01$. All regressions control for baseline values of outcomes and a set of baseline controls including age, marital status, education level, household size, household wealth, male guest treatment, podcast treatment (endline only regressions), and department fixed effects. Z-score aggregate outcomes are compiled using standardized indicators, computed in reference to control arm means.

Table 3: Impacts of treatment on aggregate SRH z-scores

Panel A	Midline survey		Endline survey		
	SRH Knowledge	SRH Attitudes	SRH Knowledge	SRH Attitudes	SRH Behaviors
Pooled treatment	0.174 (0.080)**	0.114 (0.078)	0.005 (0.042)	-0.015 (0.052)	-0.009 (0.041)
R^2	0.26	0.06	0.26	0.07	0.13
N	3,003	3,003	3,433	3,433	3,433
Panel B					
Treatment 1: CLV	0.183 (0.090)**	0.114 (0.089)	-0.054 (0.046)	0.010 (0.063)	-0.037 (0.049)
Treatment 2: CLV+Kit	0.166 (0.099)*	0.113 (0.098)	0.066 (0.052)	-0.041 (0.059)	0.019 (0.046)
R^2	0.26	0.06	0.27	0.07	0.13
N	3,003	3,003	3,433	3,433	3,433
F test: CLV = CLV+Kit	0.03	0.00	4.99	0.62	1.35
P-value	0.86	0.99	0.03	0.43	0.25

Notes: Standard errors in parenthesis clustered at the village level. * $p < 0.1$ ** $p < 0.05$; *** $p < 0.01$. All regressions control for baseline values of outcomes and a set of baseline controls including age, marital status, education level, household size, household wealth, male guest treatment, podcast treatment (endline only regressions), and department fixed effects. Z-score aggregate outcomes are compiled using standardized indicators, computed in reference to control arm means.

Table 4: Heterogenous impact by male invite and podcast on aggregate VAWG outcome z-scores

	Midline survey		Endline survey		
	VAWG Knowledge	VAWG Attitudes	VAWG Knowledge	VAWG Attitudes	VAWG Behaviors
Panel A					
Pooled treatment	0.243 (0.116)**	0.081 (0.087)	0.046 (0.076)	0.133 (0.062)**	-0.001 (0.056)
Pooled treatment x Male guest	0.080 (0.057)	-0.108 (0.066)	-0.024 (0.062)	-0.013 (0.063)	-0.071 (0.065)
Randomized to male guest	-0.111 (0.157)	0.152 (0.153)	0.010 (0.157)	0.201 (0.139)	-0.085 (0.184)
R^2	0.20	0.18	0.09	0.17	0.11
N	3,003	3,003	3,433	3,433	3,422
Panel B					
Pooled treatment	--	--	0.040 (0.109)	0.199 (0.093)**	-0.036 (0.069)
Pooled treatment x podcast	--	--	0.011 (0.137)	-0.116 (0.108)	0.014 (0.090)
Podcast	--	--	-0.011 (0.154)	0.215 (0.184)	-0.176 (0.172)
R^2	--	--	0.10	0.17	0.12
N	--	--	3,433	3,433	3,422

Notes: Standard errors in parenthesis clustered at the village level. * $p < 0.1$ ** $p < 0.05$; *** $p < 0.01$. All regressions control for baseline values of outcomes and a set of baseline controls including age, marital status, education level, household size, household wealth, male guest treatment, podcast treatment (endline only regressions), and department fixed effects. Z-score aggregate outcomes are compiled using standardized indicators, computed in reference to control arm means.

Table 5: Heterogenous impact by male invite and podcast on aggregate SRH outcome z-scores

Panel A	Midline survey		Endline survey		
	SRH Knowledge	SRH Attitudes	SRH Knowledge	SRH Attitudes	SRH Behaviors
Pooled treatment	0.096 (0.082)	0.124 (0.087)	-0.031 (0.047)	-0.041 (0.056)	-0.019 (0.050)
Pooled treatment x Male guest	0.167 (0.055)***	-0.007 (0.078)	0.077 (0.046)*	0.060 (0.069)	0.017 (0.070)
Randomized to male guest	-0.198 (0.128)	-0.066 (0.166)	-0.087 (0.129)	0.170 (0.156)	-0.040 (0.155)
R^2	0.27	0.06	0.26	0.08	0.13
N	0.096	0.124	-0.031	-0.041	-0.019
Panel B					
Pooled treatment	--	--	-0.051 (0.054)	-0.096 (0.069)	0.022 (0.056)
Pooled treatment x podcast	--	--	0.096 (0.078)	0.146 (0.096)	-0.048 (0.080)
Podcast	--	--	-0.202 (0.135)	-0.021 (0.188)	0.068 (0.160)
R^2	--	--	0.27	0.08	0.13
N	--	--	3,433	3,433	3,433

Notes: Standard errors in parenthesis clustered at the village level. * $p < 0.1$ ** $p < 0.05$; *** $p < 0.01$. All regressions control for baseline values of outcomes and a set of baseline controls including age, marital status, education level, household size, household wealth, male guest treatment, podcast treatment (endline only regressions), and department fixed effects. Z-score aggregate outcomes are compiled using standardized indicators, computed in reference to control arm means.

Table 6: Impacts by transportation on VAWG and SRH outcome z-scores

VAWG	Midline survey		Endline survey		
	Knowledge	Attitudes	Knowledge	Attitudes	Behaviors
Pooled treatment for low transportation	0.167 (0.113)	0.025 (0.087)	-0.019 (0.074)	0.112 (0.057)*	0.013 (0.049)
Pooled treatment for high transportation	0.421 (0.114)***	0.032 (0.084)	0.103 (0.075)	0.151 (0.057)***	-0.103 (0.058)*
R^2	0.20	0.17	0.09	0.16	0.11
N	3,003	3,003	3,433	3,433	3,422
F test: Low = High	14.74	0.02	3.94	0.53	4.86
P-value	0.00	0.90	0.05	0.47	0.03
SRH					
Pooled treatment for low transportation	0.063 (0.081)	0.096 (0.085)	-0.036 (0.046)	-0.047 (0.054)	0.035 (0.044)
Pooled treatment for high transportation	0.310 (0.089)***	0.135 (0.084)	0.067 (0.051)	0.034 (0.067)	-0.077 (0.050)
R^2	0.27	0.06	0.26	0.07	0.13
N	3,003	3,003	3,433	3,433	3,433
F test: Low = High	18.65	0.36	4.40	1.83	6.48
P-value	0.00	0.55	0.04	0.18	0.01

Notes: Standard errors in parenthesis clustered at the village level. * $p < 0.1$ ** $p < 0.05$; *** $p < 0.01$. All regressions control for baseline values of outcomes and a set of baseline controls including age, marital status, education level, household size, household wealth, male guest treatment, podcast treatment (endline only regressions), and department fixed effects. Z-score aggregate outcomes are compiled using standardized indicators, computed in reference to control arm means.

Table 7: Heterogenous impact on aggregate VAWG outcome z-scores

	Midline			Endline	
	VAWG knowledge	VAWG attitudes	VAWG knowledge	VAWG attitudes	VAWG behavior
Panel A					
Pooled treatment	0.303 (0.114)***	0.032 (0.089)	0.019 (0.074)	0.117 (0.055)**	-0.051 (0.054)
Pooled treatment x Never married	-0.098 (0.094)	-0.016 (0.109)	0.072 (0.094)	0.063 (0.070)	0.112 (0.085)
Marital status: Never married	-0.080 (0.199)	0.046 (0.191)	-0.249 (0.172)	0.027 (0.156)	-0.190 (0.169)
R^2	0.20	0.17	0.10	0.17	0.12
N	3,003	3,003	3,433	3,433	3,422
Panel B					
Pooled treatment	0.265 (0.112)**	0.009 (0.089)	-0.001 (0.077)	0.097 (0.050)*	-0.040 (0.050)
Pooled treatment x Self-direction	0.037 (0.104)	0.065 (0.100)	0.097 (0.088)	0.104 (0.079)	0.054 (0.078)
High self-direction (top tercile)	0.128 (0.178)	0.046 (0.176)	-0.102 (0.205)	-0.170 (0.156)	-0.291 (0.181)
R^2	0.20	0.18	0.10	0.17	0.12
N	2,999	2,999	3,426	3,426	3,415
Panel C					
Pooled treatment	0.312 (0.126)**	0.021 (0.091)	0.054 (0.088)	0.088 (0.054)	-0.070 (0.059)
Pooled treatment x Conform	-0.089 (0.137)	0.013 (0.112)	-0.029 (0.103)	0.097 (0.080)	0.097 (0.083)
High conformity (top tercile)	0.227 (0.222)	0.277 (0.178)	0.092 (0.191)	-0.275 (0.165)*	-0.058 (0.204)
R^2	0.20	0.18	0.10	0.17	0.11
N	3,002	3,002	3,432	3,432	3,421

Notes: Standard errors in parenthesis clustered at the village level. * $p < 0.1$ ** $p < 0.05$; *** $p < 0.01$. All regressions control for baseline values of outcomes and a set of baseline controls including age, marital status, education level, household size, household wealth, male guest treatment, podcast treatment (endline only regressions), and department fixed effects. Z-score aggregate outcomes are compiled using standardized indicators, computed in reference to control arm means.

Table 8: Heterogenous impact on aggregate SRH outcome z-scores

	Midline survey		Endline survey		
	SRH Knowledge	SRH Attitudes	SRH Knowledge	SRH Attitudes	SRH Behaviors
Panel A					
Pooled treatment	0.177 (0.086)**	0.051 (0.080)	-0.009 (0.045)	-0.022 (0.061)	-0.013 (0.048)
Pooled treatment x Never married	-0.012 (0.077)	0.256 (0.094)***	0.072 (0.083)	0.054 (0.092)	0.007 (0.078)
Marital status: Never married	0.065 (0.168)	-0.408 (0.186)**	-0.354 (0.154)**	-0.298 (0.206)	1.075 (0.176)***
R^2	0.27	0.06	0.27	0.08	0.15
N	3,003	3,003	3,433	3,433	3,433
Panel B					
Pooled treatment	0.182 (0.084)**	0.132 (0.088)	0.030 (0.046)	-0.007 (0.058)	0.023 (0.044)
Pooled treatment x Self-direction	-0.023 (0.087)	-0.055 (0.092)	-0.078 (0.067)	-0.003 (0.087)	-0.078 (0.064)
High self-direction (top tercile)	0.128 (0.158)	0.120 (0.177)	0.121 (0.159)	-0.110 (0.190)	0.317 (0.172)*
R^2	0.27	0.06	0.27	0.08	0.13
N	2,999	2,999	3,426	3,426	3,426
Panel C					
Pooled treatment	0.169 (0.097)*	0.142 (0.081)*	0.022 (0.048)	-0.037 (0.064)	-0.001 (0.050)
Pooled treatment x conform	0.051 (0.106)	-0.067 (0.109)	-0.021 (0.070)	0.084 (0.099)	-0.016 (0.077)
High conformity (top tercile)	0.181 (0.171)	-0.046 (0.232)	0.116 (0.149)	-0.131 (0.192)	-0.058 (0.183)
R^2	0.27	0.06	0.27	0.08	0.14
N	3,002	3,002	3,432	3,432	3,432

Notes: Standard errors in parenthesis clustered at the village level. * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$. All regressions control for baseline values of outcomes and a set of baseline controls including age, marital status, education level, household size, household wealth, male guest treatment, podcast treatment (endline only regressions), and department fixed effects. Z-score aggregate outcomes are compiled using standardized indicators, computed in reference to control arm means.

Appendix A: Supplemental analysis

Table A1: Interview success rates by intervention arm

	N	Control (C)	Means C'est la vie (T1)	C'est la vie + kit (T2)	P-value from difference		
					T1-C	T2-C	T2-T1
Panel baseline to midline	3,967	0.752	0.745	0.773	0.853	0.465	0.422
Panel baseline to endline	3,967	0.862	0.867	0.867	0.773	0.760	0.989
Balanced panel (baseline, midline and endline)	3,967	0.659	0.660	0.688	0.986	0.325	0.380

Notes: P-values are reported from Wald tests on the equality of means of control and each treatment for each variable.
Standard errors are clustered at the village level.

Table A2: Baseline balance and selective attrition (baseline to midline sample)

	Mean of Control	CLV	CLV+Kit	CLV*Attrit	CLV+Kit*Attrit	Attrit
	(1)	(2)	(3)	(4)	(5)	(6)
Age (14-19 years)	0.349	0.035 (0.024)	0.035 (0.026)	-0.020 (0.042)	-0.009 (0.046)	0.019 (0.031)
Age (20-24 years)	0.237	-0.018 (0.023)	0.001 (0.020)	0.021 (0.043)	0.006 (0.047)	-0.020 (0.030)
Age (25-29 years)	0.225	-0.025 (0.021)	-0.045 (0.022)**	-0.008 (0.041)	-0.044 (0.042)	0.013 (0.033)
Age (30-34 years)	0.189	0.007 (0.018)	0.010 (0.017)	0.006 (0.040)	0.048 (0.039)	-0.011 (0.029)
Marital status: Never married	0.254	0.019 (0.027)	0.038 (0.030)	-0.045 (0.039)	-0.002 (0.039)	0.011 (0.029)
Marital status: Married monogamous	0.520	-0.034 (0.026)	-0.037 (0.030)	0.044 (0.045)	0.000 (0.044)	-0.004 (0.030)
Marital status: Married polygamous	0.211	0.020 (0.027)	-0.000 (0.032)	-0.007 (0.038)	0.005 (0.035)	-0.005 (0.029)
Marital status: Separated, divorced or widowed	0.016	-0.005 (0.005)	-0.001 (0.005)	0.008 (0.012)	-0.003 (0.011)	-0.002 (0.008)
Education: Never attended school	0.502	0.009 (0.046)	0.027 (0.043)	-0.058 (0.055)	-0.009 (0.045)	0.082 (0.034)**
Education: Completed or some primary	0.239	0.007 (0.020)	-0.038 (0.019)**	0.079 (0.043)*	0.052 (0.040)	-0.047 (0.026)*
Education: Completed or some secondary	0.258	-0.016 (0.038)	0.011 (0.039)	-0.021 (0.041)	-0.043 (0.041)	-0.035 (0.032)
Watches some television	0.517	-0.010 (0.046)	0.006 (0.047)	0.006 (0.055)	0.040 (0.058)	-0.065 (0.045)
Has watched C'est la vie!	0.021	0.022 (0.012)*	0.012 (0.008)	-0.017 (0.017)	-0.016 (0.016)	0.009 (0.011)
Household size	9.964	0.318 (0.330)	0.087 (0.311)	-0.242 (0.426)	-0.381 (0.376)	-0.367 (0.249)
Household wealth index	-0.022	0.035 (0.263)	0.032 (0.246)	0.008 (0.250)	0.110 (0.232)	-0.518 (0.174)***
VAWG knowledge (baseline) [z-score]	0.000	0.064 (0.077)	0.011 (0.073)	0.182 (0.087)**	0.103 (0.104)	-0.163 (0.067)**
VAWG attitudes (baseline) [z-score]	0.000	-0.086 (0.087)	0.022 (0.080)	0.104 (0.141)	0.034 (0.112)	-0.131 (0.092)
VAWG behavior (baseline) [z-score]	0.000	-0.088 (0.079)	-0.061 (0.069)	0.104 (0.120)	0.018 (0.121)	-0.127 (0.073)*

SRH knowledge (baseline) [z-score]	0.000	-0.016 (0.073)	-0.038 (0.068)	0.169 (0.094)*	0.013 (0.101)	-0.242 (0.073)***
SRH attitudes (baseline) [z-score]	-0.000	-0.119 (0.093)	-0.121 (0.092)	0.338 (0.142)**	0.106 (0.115)	-0.180 (0.076)**
SRH behavior (baseline) [z-score]	0.000	-0.156 (0.082)*	-0.049 (0.077)	-0.065 (0.132)	-0.098 (0.110)	0.049 (0.088)

Notes: Standard errors in parenthesis are clustered at the village level. * $p < 0.1$ ** $p < 0.05$; *** $p < 0.01$. All regressions control for department fixed effects.

Table A3: Baseline balance and selective attrition (baseline to endline sample)

	Mean of Control	CLV	CLV+Kit	CLV*Attrit	CLV+Kit* Attrit	Attrit
	(1)	(2)	(3)	(4)	(5)	(6)
Age (14-19 years)	0.349	0.038 (0.021)*	0.043 (0.025)*	-0.065 (0.070)	-0.104 (0.066)	0.134 (0.052)**
Age (20-24 years)	0.237	-0.014 (0.019)	0.001 (0.018)	0.020 (0.071)	0.015 (0.070)	0.050 (0.050)
Age (25-29 years)	0.225	-0.036 (0.022)*	-0.069 (0.022)***	0.099 (0.054)*	0.151 (0.056)***	-0.109 (0.036)***
Age (30-34 years)	0.189	0.012 (0.017)	0.025 (0.018)	-0.054 (0.044)	-0.063 (0.042)	-0.075 (0.035)**
Marital status: Never married	0.254	0.006 (0.024)	0.036 (0.028)	0.037 (0.072)	0.026 (0.072)	0.084 (0.053)
Marital status: Married monogamous	0.520	-0.020 (0.025)	-0.037 (0.029)	-0.057 (0.080)	0.002 (0.078)	-0.053 (0.061)
Marital status: Married polygamous	0.211	0.016 (0.025)	0.002 (0.031)	0.021 (0.054)	-0.022 (0.052)	-0.059 (0.039)
Marital status: Separated, divorced or widowed	0.016	-0.003 (0.005)	-0.001 (0.005)	-0.001 (0.025)	-0.007 (0.024)	0.028 (0.018)
Education: Never attended school	0.502	-0.001 (0.043)	0.023 (0.038)	-0.027 (0.074)	0.001 (0.076)	-0.048 (0.053)
Education: Completed or some primary	0.239	0.025 (0.021)	-0.026 (0.019)	-0.017 (0.063)	-0.008 (0.055)	-0.025 (0.038)
Education: Completed or some secondary	0.258	-0.025 (0.035)	0.003 (0.036)	0.044 (0.072)	0.008 (0.068)	0.073 (0.051)
Watches some television	0.517	-0.011 (0.044)	0.025 (0.047)	0.022 (0.067)	-0.106 (0.070)	0.107 (0.047)**
Has watched C'est la vie!	0.021	0.011 (0.010)	0.007 (0.008)	0.081 (0.038)**	0.012 (0.025)	-0.005 (0.014)
Household size	9.964	0.339 (0.281)	0.063 (0.274)	-0.772 (0.578)	-0.340 (0.596)	0.899 (0.352)**
Household wealth index	-0.022	0.056 (0.235)	0.124 (0.232)	-0.217 (0.415)	-0.594 (0.348)*	0.489 (0.249)*
VAWG knowledge (baseline) [z-score]	0.000	0.093 (0.076)	0.047 (0.075)	0.111 (0.162)	-0.130 (0.128)	0.049 (0.091)
VAWG attitudes (baseline) [z-score]	0.000	-0.053 (0.097)	0.036 (0.087)	-0.116 (0.123)	-0.040 (0.108)	0.073 (0.061)
VAWG behavior (baseline) [z-score]	0.000	-0.064	-0.068	-0.033	0.136	-0.144

		(0.080)	(0.080)	(0.142)	(0.131)	(0.087)
SRH knowledge (baseline) [z-score]	0.000	0.007	-0.036	0.126	0.069	-0.155
		(0.072)	(0.070)	(0.161)	(0.118)	(0.087)*
SRH attitudes (baseline) [z-score]	-0.000	-0.036	-0.084	-0.099	-0.117	0.206
		(0.094)	(0.093)	(0.124)	(0.125)	(0.088)**
SRH behavior (baseline) [z-score]	0.000	-0.145	-0.062	-0.260	-0.057	0.164
		(0.083)*	(0.078)	(0.133)*	(0.113)	(0.066)**

Notes: Standard errors in parenthesis are clustered at the village level. * $p < 0.1$ ** $p < 0.05$; *** $p < 0.01$. All regressions control for department fixed effects.

Table A4: Experience with podcasts among villages targeted for podcasts

	N	Control (C) + podcast	Means C'est la vie (T1) + podcast	C'est la vie + kit (T2) + podcast	P-value from difference		
					T1-C	T2-C	T1-T2
Participated in podcasts	2,096	0.517	0.607	0.570	0.073	0.223	0.509
Participated in podcasts (monitoring)	2,093	0.704	0.864	0.831	0.002	0.034	0.462
Reason not participated: Not interested	913	0.018	0.018	0.010	0.945	0.380	0.363
Reason not participated: No time/not convenient	913	0.079	0.062	0.080	0.486	0.982	0.504
Reason not participated: No access to a phone	913	0.062	0.062	0.080	0.982	0.397	0.431
Reason not participated: Poor or no connectivity	913	0.085	0.084	0.090	0.970	0.825	0.844
Reason not participated: Not permitted to listen/participate	913	0.006	0.004	0.010	0.678	0.695	0.540
Reason not participated: Not informed of the time for calls/no information	913	0.721	0.670	0.637	0.202	0.035	0.375
Reason not participated: Health reasons (sickness, childbirth)	913	0.012	0.015	0.007	0.747	0.478	0.338
Reason not participated: Other reason	913	0.153	0.176	0.203	0.490	0.147	0.387
Times participated in podcasts (1-15)	1,174	2.420	2.565	2.480	0.411	0.719	0.605
Number of times participated in podcasts (1-16, monitoring)	1,673	5.059	6.295	6.385	0.069	0.069	0.903
Times participated in podcast discussion (0-15)	1,183	1.885	1.948	1.887	0.691	0.990	0.731
Number of times participated in podcast discussion (1-16, monitoring)	1,673	-	-	1.713		-	-
Liked the podcasts a lot (5 on 5 point scale)	1,183	0.821	0.903	0.832	0.046	0.827	0.056

Notes: P-values are reported from Wald tests on the equality of means of control and each treatment for each variable.

Standard errors are clustered at the village level.

Table A5: Impacts on individual VAWG indicators pooled and by treatment arm (z-scores)

	Pooled treatment	N	CLV	CLV+Kit	P- value
Midline survey					
Number of consequences for child marriage (0-10)	0.222 (0.088)**	3001	0.219 (0.101)**	0.224 (0.100)**	0.96
Number of FGM consequences (0-10)	0.152 (0.078)*	2995	0.194 (0.098)*	0.111 (0.091)	0.45
Number of consequences for IPV (0-11)	0.250 (0.124)**	2942	0.256 (0.141)*	0.245 (0.146)*	0.94
Belief youngest female marital age >=18 years	0.037 (0.104)	3003	-0.020 (0.122)	0.093 (0.115)	0.33
Belief ideal female marital age >=18 years	0.092 (0.053)*	3003	0.081 (0.056)	0.104 (0.060)*	0.63
Attitudes rejecting sexual violence (0-6)	-0.061 (0.094)	3003	-0.106 (0.117)	-0.016 (0.103)	0.44
Attitudes rejecting IPV (0-6)	0.054 (0.074)	3003	-0.015 (0.086)	0.123 (0.081)	0.08
Attitudes rejecting FGM (0-6)	-0.061 (0.057)	3002	-0.075 (0.065)	-0.047 (0.070)	0.70
Endline survey					
Number of consequences for child marriage (0-10)	0.005 (0.062)	3431	-0.053 (0.073)	0.065 (0.072)	0.11
Number of FGM consequences (0-10)	0.036 (0.061)	3425	0.019 (0.066)	0.053 (0.075)	0.63
Number of consequences for IPV (0-11)	0.025 (0.066)	3364	-0.043 (0.079)	0.096 (0.073)	0.08
Belief youngest female marital age >=18 years	0.103 (0.054)*	3433	0.125 (0.063)**	0.079 (0.058)	0.41
Belief ideal female marital age >=18 years	0.111 (0.052)**	3433	0.101 (0.059)*	0.121 (0.058)**	0.70
Attitudes rejecting sexual violence	0.035 (0.060)	3433	-0.037 (0.066)	0.109 (0.070)	0.03
Attitudes rejecting IPV	0.026 (0.050)	3433	-0.054 (0.059)	0.109 (0.059)*	0.01
Attitudes rejecting FGM	0.106 (0.054)*	3432	0.131 (0.057)**	0.080 (0.064)	0.33
Norms rejecting IPV	0.054 (0.042)	3433	0.040 (0.044)	0.069 (0.051)	0.51
Norms rejecting sexual violence	0.052 (0.038)	3432	0.046 (0.045)	0.059 (0.042)	0.75
Freedom from partner controlling behaviors	0.011 (0.046)	2498	0.009 (0.051)	0.013 (0.054)	0.94
Freedom from emotional IPV	-0.072 (0.038)*	2503	-0.063 (0.043)	-0.080 (0.047)*	0.73
Freedom from physical IPV	-0.041 (0.039)	2504	-0.007 (0.047)	-0.075 (0.049)	0.23
Freedom from sexual IPV	-0.111 (0.046)**	2511	-0.120 (0.057)**	-0.103 (0.054)*	0.78
Told anyone about IPV	0.061 (0.052)	2535	0.047 (0.060)	0.077 (0.061)	0.63
Tried to get help to stop IPV from happening	-0.015 (0.047)	2535	0.027 (0.056)	-0.059 (0.052)	0.12
Would intervene in the case of physical IPV	0.059	3430	0.055	0.062	

	(0.046)		(0.055)	(0.053)	0.90
Freedom from harassment and sexual VAWG	-0.016	3282	-0.011	-0.021	
	(0.046)		(0.050)	(0.052)	0.81
Freedom from emotional VAWG	-0.020	3269	0.003	-0.044	
	(0.048)		(0.051)	(0.054)	0.30
Freedom from physical VAWG	-0.018	3314	0.000	-0.037	
	(0.044)		(0.050)	(0.047)	0.38
Freedom from FGM	0.094	1747	0.106	0.081	
	(0.048)*		(0.051)**	(0.056)	0.60
Never married or cohabited (adolescent)	0.003	1242	0.030	-0.027	
	(0.041)		(0.046)	(0.045)	0.18

Notes: Standard errors in parenthesis clustered at the village level. * $p < 0.1$ ** $p < 0.05$; *** $p < 0.01$. All regressions control for baseline values of outcomes and a set of baseline controls including age, marital status, education level, household size, household wealth, male guest treatment, podcast treatment (endline only regressions), and department fixed effects. All outcomes are standardized.

Table A6: Impacts on individual SRH indicators pooled and by treatment arm (z-scores)

	Pooled treatment	N	CLV	CLV+Kit	P- value
Midline survey					
Number of contraception methods named	0.164 (0.073)**	3000	0.119 (0.069)*	0.209 (0.103)**	0.37
Number of correct HIV transmission methods (0-4)	0.100 (0.064)	3003	0.135 (0.078)*	0.066 (0.071)	0.39
Number of correct HIV prevention methods (0-7)	0.144 (0.087)*	3003	0.175 (0.100)*	0.114 (0.100)	0.53
Attitudes supporting contraceptive use (0-6)	0.112 (0.079)	3000	0.111 (0.089)	0.113 (0.098)	0.99
Endline survey					
Number of contraception methods named	0.014 (0.048)	3429	-0.050 (0.047)	0.080 (0.060)	0.02
Number of abortion consequences (0-7)	0.020 (0.052)	3422	-0.049 (0.066)	0.090 (0.058)	0.05
Number of correct risks of early pregnancy (0-4)	0.000 (0.047)	3427	-0.058 (0.056)	0.060 (0.054)	0.06
Knows location to get family planning	0.059 (0.038)	3433	0.028 (0.042)	0.092 (0.042)**	0.09
Number of correct HIV transmission methods (0-4)	-0.043 (0.040)	3433	-0.069 (0.041)*	-0.016 (0.049)	0.23
Number of correct HIV prevention methods (0-7)	-0.033 (0.044)	3433	-0.033 (0.046)	-0.033 (0.059)	1.00
Attitudes supporting contraceptive use	0.002 (0.064)	3431	0.045 (0.076)	-0.042 (0.078)	0.30
Fertility ideals	-0.010 (0.048)	2631	-0.011 (0.056)	-0.010 (0.055)	0.99
Never sexually debuted (adolescent)	0.007 (0.041)	1240	0.063 (0.044)	-0.052 (0.048)	0.01
Never gave birth or pregnant in last 12 months (adolescent)	0.020 (0.029)	1242	0.026 (0.031)	0.013 (0.035)	0.69
Used condom in last sexual intercourse	-0.007 (0.041)	2531	-0.042 (0.045)	0.030 (0.050)	0.14
Currently using modern contraceptives	-0.027 (0.044)	2464	-0.059 (0.051)	0.005 (0.047)	0.15
Tested for HIV (last 12 months)	-0.002 (0.050)	3433	-0.021 (0.058)	0.016 (0.057)	0.52
No chlamydia (proxy: abnormal discharge, last 6 months)	0.038 (0.035)	3433	0.048 (0.043)	0.029 (0.037)	0.64
No syphilis (proxy: genital sores, last 6 months)	0.022 (0.043)	3433	-0.011 (0.050)	0.055 (0.050)	0.19

Notes: Standard errors in parenthesis clustered at the village level. * $p < 0.1$ ** $p < 0.05$; *** $p < 0.01$. All regressions control for baseline values of outcomes and a set of baseline controls including age, marital status, education level, household size, household wealth, male guest treatment, podcast treatment (endline only regressions), and department fixed effects. All outcomes are standardized.

Table A7: Impacts of treatment on aggregate VAWG z-scores (unadjusted)

Panel A	Midline survey		Endline survey		
	VAWG Knowledge	VAWG Attitudes	VAWG Knowledge	VAWG Attitudes	VAWG Behaviors
Pooled treatment	0.266 (0.112)**	0.024 (0.090)	0.021 (0.069)	0.129 (0.059)**	-0.040 (0.046)
R^2	0.15	0.12	0.07	0.13	0.10
N	3,003	3,003	3,433	3,433	3,422
Panel B					
Treatment 1: CLV	0.283 (0.132)**	-0.030 (0.095)	-0.037 (0.082)	0.099 (0.064)	-0.004 (0.051)
Treatment 2: CLV+Kit	0.250 (0.129)*	0.078 (0.106)	0.080 (0.078)	0.160 (0.067)**	-0.076 (0.053)
R^2	0.15	0.12	0.08	0.13	0.10
N	3,003	3,003	3,433	3,433	3,422
F test: CLV = CLV+Kit	0.06	1.35	1.91	1.20	2.11
P-value	0.81	0.25	0.17	0.28	0.15

Notes: Standard errors in parenthesis clustered at the village level. * $p < 0.1$ ** $p < 0.05$; *** $p < 0.01$. All regressions control for baseline values of outcomes, randomization to the podcast (endline only regressions) and male invite treatment and department fixed effects. Z-score aggregate outcomes are compiled using standardized indicators, computed in reference to control arm means.

Table A8: Impacts of treatment on aggregate SRH z-scores (unadjusted)

Panel A	Midline survey		Endline survey		
	SRH Knowledge	SRH Attitudes	SRH Knowledge	SRH Attitudes	SRH Behaviors
Pooled treatment	0.162 (0.082)**	0.111 (0.079)	-0.010 (0.044)	-0.020 (0.054)	-0.004 (0.046)
R^2	0.22	0.05	0.22	0.05	0.05
N	3,003	3,003	3,433	3,433	3,433
Panel B					
Treatment 1: CLV	0.168 (0.092)*	0.110 (0.089)	-0.073 (0.048)	0.005 (0.065)	-0.039 (0.055)
Treatment 2: CLV+Kit	0.157 (0.101)	0.112 (0.099)	0.054 (0.053)	-0.046 (0.060)	0.032 (0.052)
R^2	0.22	0.05	0.22	0.05	0.05
N	3,003	3,003	3,433	3,433	3,433
F test: CLV = CLV+Kit	0.01	0.00	5.61	0.59	1.70
P-value	0.92	0.98	0.02	0.44	0.19

Notes: Standard errors in parenthesis clustered at the village level. * $p < 0.1$ ** $p < 0.05$; *** $p < 0.01$. All regressions control for baseline values of outcomes, randomization to the podcast (endline only regressions) and male invite treatment and department fixed effects. Z-score aggregate outcomes are compiled using standardized indicators, computed in reference to control arm means.

Table A9: Impacts of treatment on aggregate VAWG z-scores, balanced panel sample

Panel A	Midline survey		Endline survey		
	VAWG Knowledge	VAWG Attitudes	VAWG Knowledge	VAWG Attitudes	VAWG Behaviors
Pooled treatment	0.248 (0.111)**	0.020 (0.084)	0.021 (0.063)	0.109 (0.052)**	-0.021 (0.048)
R^2	0.19	0.17	0.10	0.18	0.11
N	2,655	2,655	2,655	2,655	2,644
Panel B					
Treatment 1: CLV	0.265 (0.130)**	-0.044 (0.088)	-0.046 (0.069)	0.071 (0.055)	0.022 (0.054)
Treatment 2: CLV+Kit	0.231 (0.129)*	0.085 (0.100)	0.088 (0.077)	0.146 (0.060)**	-0.063 (0.054)
R^2	0.19	0.17	0.10	0.18	0.11
N	2,655	2,655	2,655	2,655	2,644
F test: CLV = CLV+Kit	0.07	2.20	2.98	2.13	2.84
P-value	0.80	0.14	0.09	0.15	0.09

Notes: Standard errors in parenthesis clustered at the village level. * $p < 0.1$ ** $p < 0.05$; *** $p < 0.01$. All regressions control for baseline values of outcomes and a set of baseline controls including age, marital status, education level, household size, household wealth, male guest treatment, podcast treatment (endline only regressions), and department fixed effects. Z-score aggregate outcomes are compiled using standardized indicators, computed in reference to control arm means.

Table A10: Impacts of treatment on aggregate SRH z-scores, balanced panel sample

Panel A	Midline survey		Endline survey		
	SRH Knowledge	SRH Attitudes	SRH Knowledge	SRH Attitudes	SRH Behaviors
Pooled treatment	0.164 (0.082)**	0.089 (0.083)	0.016 (0.044)	-0.062 (0.055)	-0.042 (0.047)
R^2	0.26	0.05	0.27	0.07	0.12
N	2,655	2,655	2,655	2,655	2,655
Panel B					
Treatment 1: CLV	0.158 (0.093)*	0.085 (0.094)	-0.042 (0.048)	-0.046 (0.070)	-0.066 (0.056)
Treatment 2: CLV+Kit	0.169 (0.102)	0.093 (0.104)	0.075 (0.055)	-0.079 (0.060)	-0.019 (0.052)
R^2	0.26	0.05	0.27	0.07	0.12
N	2,655	2,655	2,655	2,655	2,655
F test: CLV = CLV+Kit	0.01	0.01	4.33	0.23	0.81
P-value	0.92	0.93	0.04	0.63	0.37

Notes: Standard errors in parenthesis clustered at the village level. * $p < 0.1$ ** $p < 0.05$; *** $p < 0.01$. All regressions control for baseline values of outcomes and a set of baseline controls including age, marital status, education level, household size, household wealth, male guest treatment, podcast treatment (endline only regressions), and department fixed effects. Z-score aggregate outcomes are compiled using standardized indicators, computed in reference to control arm means.

Table A11: Heterogenous impact by social desirability on aggregate VAWG and SRH outcome z-scores

VAWG	Midline survey		Endline survey		
	Knowledge	Attitudes	Knowledge	Attitudes	Behaviors
Pooled treatment	0.324 (0.129)**	0.003 (0.087)	0.044 (0.098)	0.116 (0.057)**	-0.060 (0.061)
Pooled treatment x social desirability	-0.130 (0.153)	0.065 (0.124)	-0.036 (0.107)	0.010 (0.082)	0.083 (0.080)
High social desirability (> top tercile)	0.073 (0.221)	0.147 (0.214)	0.054 (0.200)	-0.249 (0.166)	-0.204 (0.181)
R^2	0.20	0.18	0.10	0.17	0.11
N	3,003	3,003	3,433	3,433	3,422
SRH					
Pooled treatment	0.201 (0.108)*	0.157 (0.075)**	0.015 (0.053)	-0.067 (0.064)	0.008 (0.050)
Pooled treatment x social desirability	-0.062 (0.125)	-0.111 (0.114)	-0.010 (0.076)	0.165 (0.090)*	-0.050 (0.075)
High social desirability (> top tercile)	0.185 (0.191)	0.020 (0.235)	0.165 (0.169)	-0.137 (0.184)	0.060 (0.176)
R^2	0.27	0.06	0.27	0.08	0.14
N	3,003	3,003	3,433	3,433	3,433

Notes: Standard errors in parenthesis clustered at the village level. * $p < 0.1$ ** $p < 0.05$; *** $p < 0.01$. All regressions control for baseline values of outcomes and a set of baseline controls including age, marital status, education level, household size, household wealth, male guest treatment, podcast treatment (endline only regressions), and department fixed effects. Z-score aggregate outcomes are compiled using standardized indicators, computed in reference to control arm means.

Table A12: Treatment on the treated (TOT) estimates for VAWG aggregates (z-scores)

	Midline survey		Endline survey		
	VAWG Knowledge	VAWG Attitudes	VAWG Knowledge	VAWG Attitudes	VAWG Behaviors
Panel A					
Participated in film club	0.317 (0.122)***	0.032 (0.092)	0.033 (0.076)	0.143 (0.056)**	-0.038 (0.051)
R^2	0.18	0.17	0.09	0.16	0.11
N	3,003	3,003	3,433	3,433	3,422
Kleibergen-Paap LM stat	68.83	68.63	70.85	70.91	70.80
P-value	0.000	0.000	0.000	0.000	0.000
Panel B					
High attendance (≥ 3 screenings)	0.592 (0.240)**	0.059 (0.171)	0.062 (0.141)	0.268 (0.105)**	-0.070 (0.096)
R^2	0.11	0.17	0.09	0.15	0.11
N	0.592	0.059	0.062	0.268	-0.070
Kleibergen-Paap LM stat	53.65	53.55	56.50	56.35	56.73
P-value	0.000	0.000	0.000	0.000	0.000

Notes: Standard errors in parenthesis clustered at the village level. * $p < 0.1$ ** $p < 0.05$; *** $p < 0.01$. All intensity of treatment indicators are from monitoring data and the IV used is randomization to pooled treatment. All regressions control for baseline values of outcomes and a set of baseline controls including age, marital status, education level, household size, household wealth, male guest treatment, podcast treatment (endline only regressions), and department fixed effects. Z-score aggregate outcomes are compiled using standardized indicators, computed in reference to control arm means.

Table A13: Treatment on the treated (TOT) estimates for SRH aggregates (z-scores)

	Midline survey		Endline survey		
	SRH Knowledge	SRH Attitudes	SRH Knowledge	SRH Attitudes	SRH Behaviors
Panel A					
Participated in film club	0.197 (0.090)**	0.128 (0.088)	0.005 (0.046)	-0.017 (0.058)	-0.010 (0.045)
R^2	0.26	0.05	0.26	0.07	0.13
N	3,003	3,003	3,433	3,433	3,422
Kleibergen-Paap LM stat	68.61	68.91	70.96	70.97	70.87
P-value	0.000	0.000	0.000	0.000	0.000
Panel B					
High attendance (≥ 3 screenings)	0.367 (0.174)**	0.239 (0.166)	0.010 (0.087)	-0.031 (0.109)	-0.020 (0.085)
R^2	0.24	0.04	0.26	0.07	0.13
N	0.367	0.239	0.010	-0.031	-0.020
Kleibergen-Paap LM stat	53.68	53.75	56.51	56.41	56.47
P-value	0.000	0.000	0.000	0.000	0.000

Notes: Standard errors in parenthesis clustered at the village level. * $p < 0.1$ ** $p < 0.05$; *** $p < 0.01$. All intensity of treatment indicators are from monitoring data and the IV used is randomization to pooled treatment. All regressions control for baseline values of outcomes and a set of baseline controls including age, marital status, education level, household size, household wealth, male guest treatment, podcast treatment (endline only regressions), and department fixed effects. Z-score aggregate outcomes are compiled using standardized indicators, computed in reference to control arm means.

Table A14: Correlates of transportation for the treatment sample

	Index of transportation effect	High transportation effect (top tercile)
Age (20-24 years)	-0.36 (0.14)**	-0.02 (0.03)
Age (25-29 years)	-0.22 (0.13)	0.03 (0.03)
Age (30-34 years)	-0.13 (0.11)	0.01 (0.04)
Marital status: Never married	-0.45 (0.13)***	-0.13 (0.03)***
Marital status: Married polygamous	0.00 (0.11)	0.05 (0.03)
Marital status: Separated, divorced or widowed	-0.72 (0.43)*	-0.13 (0.09)
Education: Completed or some primary	0.11 (0.10)	0.03 (0.03)
Education: Completed or some secondary	0.10 (0.13)	0.07 (0.04)*
Household size	0.02 (0.01)	0.01 (0.00)*
Household wealth index	-0.05 (0.02)**	-0.01 (0.01)*
Randomized to male guest	-0.07 (0.08)	0.00 (0.02)
R^2	0.03	0.04
N	2,012	2,012

Notes: Standard errors in parenthesis clustered at the village level. * $p < 0.1$ ** $p < 0.05$; *** $p < 0.01$. All regressions control for baseline values and department fixed effects.

Appendix B. Methods and ethics

B.1. Description of *C'est la Vie!* season 1

Table B1. Description of *C'est la Vie!* season 1 and discussion guide themes

Episode	Themes or information topics	Plot summary	Discussion guide theme
1: <i>La nouvelle</i> [the newcomer]	- Health seeking behavior - Family violence (among co-wives and perpetrated by mothers-in-law) - Workplace violence	A new midwife, Assitan, comes to work at Ratanga health center. Her arrival does not go unnoticed: Korsa and the other midwives give her a cold and suspicious welcome while Jean-Paul, a male nurse at Ratanga, seems under the spell of the newcomer.	- Child marriage, marital rape - Adolescent pregnancy
2: <i>Pour une cuisse de poulet</i> [For a chicken thigh]	- IPV and family violence (among co-wives) - Work-place violence, corruption - Pre-natal care - Gender equity (care work)	Korsa encounters many problems with her husband and co-wife. Assitan discovers that Korsa is carrying out shady activities with the drug stock at the center and that she has a habit of extracting money from patients.	
3: <i>Trop c'est trop</i> [Enough is enough]	- Family violence (perpetrated by mother-in-law) - Work-place violence - IPV - Child marriage, marital rape	Aminata, a 15-year-old girl comes to the health center complaining of stomach pain, but she has no money. Assitan manages to take care of the girl for free, despite Korsa's reluctance. The plot reveals that the girl is pregnant and, through the discussions, Assitan understands that she has suffered a forced marriage.	
4: <i>Pour un bouquet de fleurs</i> [For a bouquet of flowers]	- Family violence (perpetrated by mother-in-law) - IPV, reporting to law enforcement - Work-place violence	New tensions arise over the criteria for hospitalization of patients at the health center. Assitan accuses Korsa of reserving rooms for the rich. Yaye is forced to intervene to end this feud. During this time, Ramatou learns that Job, his favorite radio host, is injured and is going to the health center.	- IPV - Birth spacing
5: <i>Révélation</i> [Revelations]	- Family violence (perpetrated by mother-in-law) - IPV - Family planning, birth spacing - Work-place violence	Rokoba comes to babysit little Syra so Magar can go to work. During the day Rokoba finds Magar's diary which discloses her fear that her husband will kill her. At the health center, Korsa wants revenge on Assitan and deliberately dirties her blouse with ink. Emadé learns that she is pregnant, while her youngest is only 8 months old.	
6: <i>La première fois</i> [The first time]	- Family violence (perpetrated by mother-in-law) - Child marriage, marital rape - Abortion - Breastfeeding - Birth spacing	Yaye learns that Emadé is pregnant again. She goes to visit her to give her advice on weaning her child off of breastfeeding. The young girl Aminata returns to the health center after an attempt abortion. She ends up dying and Assitan is devastated.	
7: <i>A qui la faute?</i>	Family violence (perpetrated by mother-in-law)	Assitan feels guilty and loses her confidence following Aminata's death. While she receives a consultation for pregnant woman who suffers	IPV

[Who's fault is it?]	- Child marriage, marital rape - Dangers associated with traditional medicine, black market drugs	from stomach aches, Jean-Paul comes to her aid. The patient is poisoned following the consumption of drugs bought on the street. Emadé is ill and Rokoba, who no longer trusts the health center, summons the <i>marabout</i> to treat her.	Lack of freedom and indifference of the community
8: <i>Prise de conscience</i> [Awareness-raising]	- Dangers associated with traditional medicine - IPV - Work-place violence - Sexual assault	Aminata's death is causing a stir in Ratanga. Patients no longer want to seek treatment, and Assitan is depressed and no longer wants to go to work. Meanwhile, Rokoba ends up discovering that the <i>marabout</i> is a charlatan, he attempts to sexually assault Emadé and it driven out of the house. Magar, arrives at the center with a broken arm following beatings by her husband and claims to have fallen down the stairs.	
9: <i>Evasions</i> [Escape]	- Infidelity - IPV - Pregnancy complications	Touli spends time with his mistress, who suggests that he leave Magar and come and live with her. Rokoba came to watch Magar at Touli's request, but Magar manages to drug her and flee with her daughters to the village.	
10: <i>Les amoureux de Ratanga</i> [The lovers of Ratanga]	- Infidelity - Forced marriage - Sexual assault - Youth sexual and reproductive health	Assitan leaves the health center and says she no longer wants to work there. Jean-Paul, her nursing colleague, does not stop calling her to convince her to come back. Assitan's attitude annoys Korsa who lashes out at Yaye. Job invites Assitan to dinner and suggests that he host an information program for the neighborhood youth on the radio.	
11: <i>Faux-semblants</i> [False appearances]	- Sexually transmitted infections (STIs) - Bride price, marriage institutions - IPV	During a consultation at the health center, Emadé learns that she has an STI. She tries to hide it from Talla for fear of being accused of adultery. She also suspects him of cheating on her because he's on his phone all the time. Magar meets with her childhood friends, who without knowing the violent reality of her marriage, envy her life in the city and her husband. But Touli comes to the village to look for Magar and, with the help of her stepfather, manages to bring her back to their home.	- Early and forced marriage - Childbirth
12: <i>Coup monté</i> [A set-up]	- Pregnancy and childbirth complications, facility birth - Work-place violence	Assitan maintains her decision: she wants to resign. Meanwhile a woman gives birth at home and Assitan has no choice but to help. Assitan and Job witness the verbal abuse and harassment that Magar suffers from her employer. On Assitan's advice, Magar decides to quit her job.	
13: <i>Convictions</i> [Convictions]	- Youth sexual and reproductive health, family planning - Sexually transmitted infections (STIs)	Assitan discusses with her colleagues her project of information sessions dedicated to young people at the health center. Rokoba searches Emadé's belongings and discovers that she is taking medicine to treat an STI, and immediately informs her son who is angry believing he has contracted HIV.	- HIV/AIDS/STIs - Family planning and contraception
14: <i>Des militants à Ratanga</i>	Youth sexual and reproductive health, family planning	Dr Moulaye asks his team to better organize themselves in their work to facilitate patient care. He is trying to find funding to improve the	

[The militants of Ratanga]	HIV	services offered and become a level 3 health center. Assitan launches his family planning project and organizes the first discussion session on the sexual and reproductive health of youth.	
15: <i>L'intrigante</i> [The schemer]	- Dangers associated with abortion - Obstetric violence - IPV	Korsa shows Aïcha how to steal medical equipment to sell it, and agrees to perform a clandestine abortion against the payment of a large sum. Later, Korsa brutalizes verbally and physically a woman in labor. After discussing it with Dr. Moulaye, Yaye suggests that Magar coordinate the community <i>relias</i> (community health workers).	
16: <i>Stratagèmes</i> [Tricks]	- Family violence (perpetrated by mother-in-law) - Gender equity (care work)	Emadé does not feel well and Rokoba wants to send her to the village instead of bringing her for treatment at the health center. An unknown woman abandons her baby at the health center which causes a disruption during the evaluation of the center to be approved to a level 3 classification.	
17: <i>Ennemie jurée</i> [Sworn enemy]	- Work-place violence - IPV (controlling behaviors around women's right to work) - Youth sexual and reproductive health, family planning - Abortion	Assitan surprises Korsa digging through Dr. Moulaye's secret files. For revenge, Korsa decides to sabotage the actions of Assitan and to end the information sessions on sexual health and reproductive health aimed at young people. Badiène develops a plan with Magar to enable her to accept the job offered to him at the center of Ratanga's health, without Touli knowing.	- Marital relationships - Family planning and contraception
18: <i>Intimidation</i> [Intimidation]	- IPV - Maternal and child health, breastfeeding - Youth sexual and reproductive health, family planning	An armed man arrives at the center and threatens staff to take care of his wife who is about to give birth. After childbirth, the woman refuses to give her baby the first milk. Magar and Yaye explain to him that there is nothing better for the infant than colostrum. Rachel's father barges in during the youth sexual and reproductive health briefing. He slaps his daughter and forces her to leave the session. He is very angry and claims that the information provided incites young people to debauchery.	

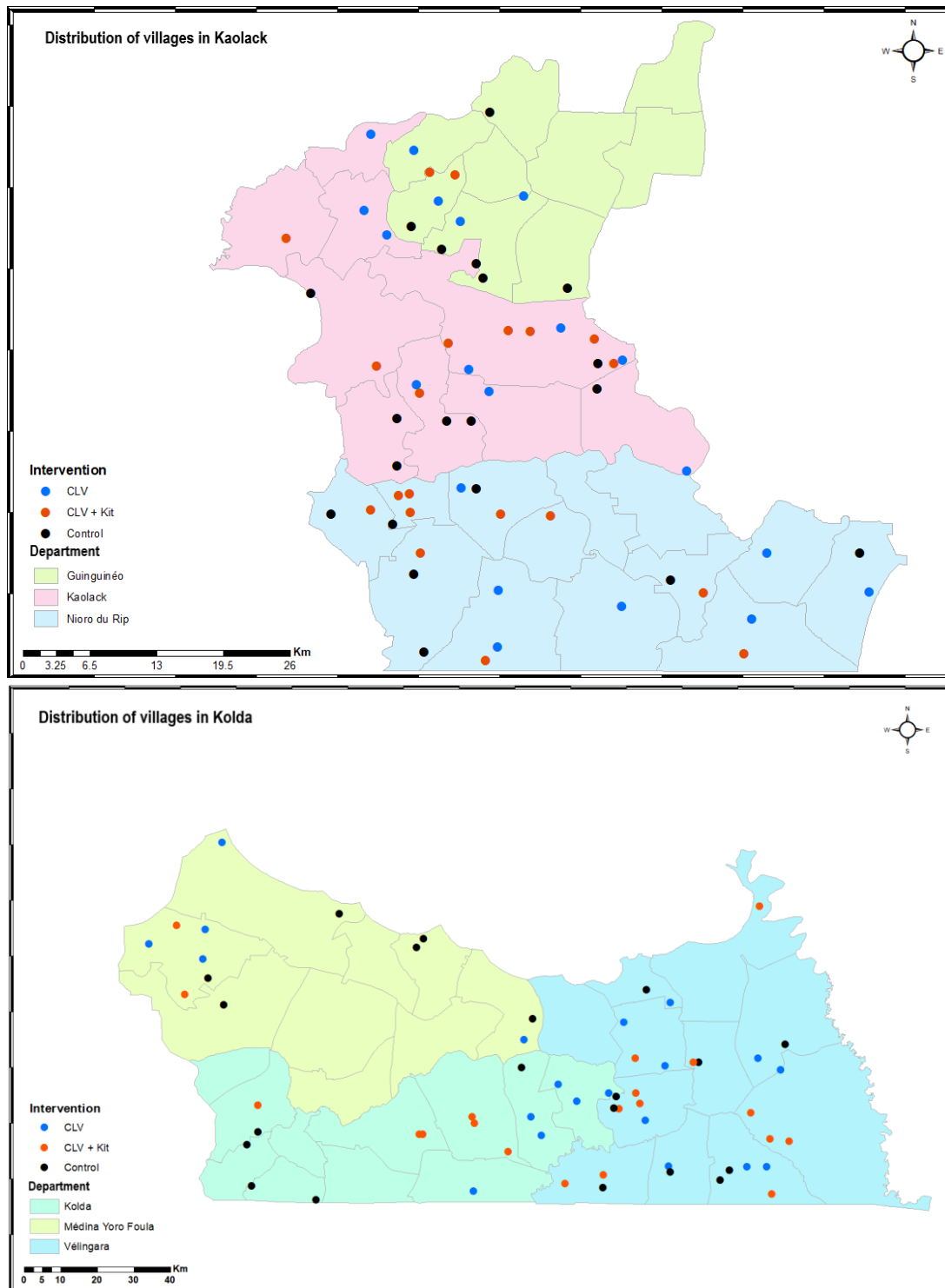
Source: Authors notes and 'Parlons-en! Un Guide de Discussion Pour Accompagner Chaque Episode Televisé' (*C'est la vie!*)

B.2. Piloting implementation

The *C'est la Vie!* series was produced in Senegal based on extensive formative work and widely broadcasted across West and Central Africa. To ensure the feasibility and acceptability of the intervention in study areas, a pilot study was conducted in collaboration with *MobiCiné* over a two-week period in six villages. The main objectives of the pilot were to determine the optimal and most feasible implementation parameters for the impact evaluation, including: optimal time, duration, and location for film clubs, system of invitation for women (girls), men (boys) and couples to maximize participation, approximate attendance at film clubs and a feasible monitoring system. In addition, secondary objectives included assessing reactions and opinions from participants regarding the series and post-screening discussions, and identifying potential obstacles to large-scale implementation. As part of the pilot, a census of households was undertaken with a short (10 minute) questionnaire asked to the head of the household and target participants (aged 15 to 34), monitoring and structured observations during screenings and post-screening discussions, key informant interviews with village chiefs and community health volunteers, free listing exercises and focus groups with participants (stratified by sex). The villages and piloting was purposefully diverse in order to solicit a variety of opinions and implementation models. Overall, the series was well received, mirroring formative work ensuring that the series was suited to and culturally appropriate for Senegalese populations.

B.3 Map of villages

Figure B1. Map of study villages in Kaolack and Kolda regions



B.4. Sample size calculations

Power calculations for this study drew on data from the 2017 Senegalese DHS. We conducted power calculations on three primary outcomes related to behaviors and attitudes of IPV and sexual and reproductive health among women – modern contraceptive use, attitudes justifying IPV and 12-month experience of IPV. Desired statistical power was set to 80 percent, and desired significance level was set to 0.05. Means and intra-cluster correlations were estimated from the 2017 DHS, using the rural population and accounting for survey weights. We allow for 0.10 correlation with baseline characteristics. The desired minimum detectable impacts were set to 6 percentage points for contraceptive use and IPV, and 10 percentage points for attitudes. Given the low prevalence of IPV in the last 12 months and modern contraceptive use, 6 percentage points are large effect sizes, however, these are in the range found by studies examining impacts of social behavior change communication and mass media on both outcomes.

For contraceptive use and attitudes towards IPV we need a minimum of 28 women per village by endline. For IPV, we are not powered to detect impacts across each intervention arm, but we are powered to detect impacts if we combine intervention arm 1 and arm 2. The needed sample for IPV when arm 1 and arm 2 are combined is 23 married (partnered) women per village at endline. Assuming 5 percent attrition by endline, this means a sample of 24 married (partnered) women per village at baseline. If we assume approximately 70 percent of women 14 to 34 years are partnered, then this would mean we need a sample of approximately 34 women per village at baseline, 24 of which will likely be partnered and 10 without a partner. The total sample of women is thus 4,080 across the 120 villages. We note that due to geographical variation and differences in recall periods, among others, power calculations are not able to provide exact predictions of statistical power. However, given a sample design, they can provide useful guidance in designing the sample.

B.5. Ethics

The study and its modifications were approved by the International Food Policy Research Institute's (IFPRI) Institutional Review Board (IRB) as well as the *Comite National d'Ethique pour la Recherche en Santé* (CNERS, the Senegalese national ethics committee on health research). IFPRI's full study approval was received in August 2019 (PHND-19-0739 and IRB #00007490) and modifications due to COVID-19 and phone survey approval was received in May 2020 (PHND-19-0739M). CNERS full study approval was received in August 2019 (000132/MSAS/DPRS/CNERS) and modifications due to COVID-19 and phone survey approval was received in June 2020 (000102/MSAS/DPRS/CNERS). The study implemented numerous safeguards and best practices to survey populations during COVID-19 and to ask questions regarding sensitive topics, including SRH and VAWG.

At both baseline and endline, the study followed best practice for collecting sensitive information on VAWG, following guidelines set out by the WHO (World Health Organization 2001; 2016). In particular, female enumerators conducted all interviews in private locations (typically near or around participants' homes). The survey was introduced to non-participants as a general inquiry regarding women's health and wellbeing and VAWG topics were not mentioned. Enumerators received specialized training on interviewing on sensitive topics with a focus on VAWG conducted in collaboration with national violence specialists. Participants underwent an informed consent procedure, with assent sought from legal minors, alongside consent of guardians or caregivers. For the VAWG module in particular, a graduated consent was implemented, allowing participants to skip questions voluntarily if they did not feel comfortable responding. Participants who were not able to be interviewed alone were not asked VAWG questions (with the exception of the presence of children under the age of two years old). Regardless of VAWG disclosure, all participants were given a card with de-identified referral sources (including legal and social services, as well as a toll free national hotline). Exceptions were made for participants who indicated they would not be able to keep the card private. In this case, enumerators discussed options and hotline information orally to women, encouraging them to memorize or write down the hotline number. In addition, enumerators offered women direct referrals in the case they requested them or felt they were in immediate physical danger. In this case, a simple sheet was filled out with basic information, including safe contact options and information was given directly to local services for response. Pre-arrangements were made with local services to ensure their collaboration and response to survey team referrals. Acute cases were monitored to ensure proper and timely response. Enumerators and implementers were offered access to the same services in the case of need, for vicarious trauma and ensure field teams were equally protected with response options.

At endline, although COVID-19 prevalence in Senegal was low, various protocols were put in place to protect enumerator teams and participants. These included providing masks and hand sanitizer during enumerator training and fieldwork for enumerators, as well as cotton swabs and spray to disinfect tablets. Enumerator training included a module on COVID-19, methods of spread and prevention measures. All enumerators monitored a list of common symptoms and all participants were screened prior to interviews based on these symptoms. All participants showing three or more symptoms were not interviewed. Informed consent included information about COVID-19 and the possible risks of taking part in the interview. All participants were offered face masks (two per participant) and interviewers were encouraged to take place outside or in locations with low risk (high air flow). Finally, all enumerators were covered by health insurance to ensure any costs from health-related problems encountered during fieldwork would be covered by the project. To our knowledge, there were no cases of COVID-19 among the field team for the duration of the survey.

B.6. Indicator definitions and construction

Table B2. Indicator definitions: Outcome variables and heterogeneous effects by domain

<i>Panel A: Knowledge indicators</i>		
Domain	Indicator	Description and construction of the variable
Violence against women and girls (VAWG)	Child marriage consequences	Number of adverse consequences identified for child marriage (ranging from 0 –10): 1) legal consequences, 2) education and schooling consequences, 3) early pregnancy and pregnancy-related complications, 4) violence, 5) maternal mortality, 6) physical and mental health issues, 7) economic consequences, 8) increased risk of STIs/HIV; 9) family or marital problems; 10) growing up too quickly.
	FGM consequences	Number of adverse consequences identified for FGM (ranging from 0 – 10): 1) legal consequences, 2) excessive bleeding/hemorrhaging, 3) sickness, infection, fever, 4) infertility later in life, 5) death, 6) depression and mental health problems, 7) urinary problems, 8) increased risk of STIs/HIV, 9) complications in childbirth, 10) consequences for sexuality/sexual pleasure.
	IPV consequences	Number of adverse consequences identified for intimate partner violence (ranging from 0 – 11): 1) legal consequences, 2) physical and mental health issues, 3) constrained mobility, 4) physical injuries, 5) increased risk of STIs/HIV, 6) death, 7) problems with other family members, 8) problems with other community members, 9) consequences for children, 10) economic consequences, 11) family separation.
Sexual and reproductive health (SRH)	Risks of early pregnancy	Number of risks identified for early pregnancy (ranging from 0-4): 1) low birth weight or premature baby, 2) delivery complications, including dystocia, hemorrhaging, obstetric fistula 3) death or mother or baby, 4) other physical or mental consequences.
	Abortion consequences	Number of adverse consequences identified for illegal abortion (ranging from 1 – 7): 1) legal consequences, 2) excessive bleeding/hemorrhaging, 3) sickness, infection, fever, 4) infertility later in life, 5) death, 6) depression and mental health problems, 7) injuries and bodily harm.
	Contraceptive knowledge	Number of contraceptive types known (ranging from 0 – 12): 1) Female sterilization, 2) male sterilization, 3) IUD, 4) injectable, 5) implant, 6) pill, 7) male condom, 8) female condom, 9) morning after pill/emergency contraceptives, 10) rhythm/calendar method, 11) lactational amenorrhea, 12) withdrawal.
	Family planning availability	Binary indicator =1 if knows of a place to receive family planning
	HIV transmission	Number of HIV transmission modes known (ranging from 0 – 4): 1) sexual intercourse, 2) sharing needles/blades, 3) blood transfusion with unscreened blood, 4) mother-to-child transmission.
	HIV prevention	Number of HIV prevention behaviors known (ranging from 0 – 7): 1) abstinence, 2) condom use, 3) limit number of sexual partners, 4) male circumcision, 5) avoid blood transfusions with unsafe blood, 6) avoid sharing needles or razors, 7) get tested (including partner).
<i>Panel B: Attitude and norm indicators</i>		
Domain	Indicator	Description and construction of the variable
	Personal beliefs about early marriage	Binary variable =1 if the respondent indicates her opinion is that the youngest acceptable age for a girl / young woman to get married is ≥ 18 years and =0 if <18 years.

VAWG	Personal beliefs on ideal age at marriage	Binary variable =1 if the respondent indicates her opinion is that the ideal age for a girl / young woman to get married is ≥ 18 years and =0 if < 18 years.
	Attitudes rejecting sexual violence	Equally weighted index from five questions from the personal beliefs on response to sexual violence sub-scale of the “Social norms and beliefs about gender-based violence scale” (Perrin et al. 2019) – with response options: 1 (agree), 2 (not sure if I agree or disagree), 3 (disagree, but am not ready to tell others), and 4 (disagree and would be willing to tell others): 1) “Husbands should abandon/reject/divorce their wife if she reports that she has been raped”; 2) “A man should have the right to demand sex from a woman or girl even if he is not married to her”; 3) “A woman/girl would be stigmatized if she were to report sexual violence”; 4) A woman/girl should be blamed when she has been raped” and 5) “Families should ignore/reject a daughter if she reports that she has been raped” One item (“Sexual violence against women and girls should be accepted as a normal part of life”) dropped.
	Norms rejecting sexual violence	Equally weighted index from four questions social norms on response to sexual violence sub-scale of the “Social norms and beliefs about gender-based violence scale” (Perrin et al. 2019) – with response options: 1 (none of them), 2 (a few of them), 3 (about half of them), 4 (most of them) and 5 (all of them): 1) “How many of the people whose opinion matters most to you expect a husband to abandon his wife if she reports that she has been raped?”; (2) “How many of the people whose opinion matters most to you expect the family to ignore/reject a daughter if she reports that she has been raped?”; (3) “How many of the people whose opinion matters most to you accept sexual violence against women and girls a normal part of life?” and (4) “How many of the people whose opinion matters most to you blame women/girls when they are raped?” One item (“How many of the people whose opinion matters most to you think that a man should have the right to demand sex from a woman or girl even if he is not married to her?”) was dropped.
	Attitudes rejecting IPV	Equally weighted index created from four questions from the personal beliefs on husbands right to use violence sub-scale of the “Social norms and beliefs about gender-based violence scale” (Perrin et al. 2019) – with response options: 1 (agree), 2 (not sure if I agree or disagree), 3 (disagree, but am not ready to tell others), and 4 (disagree and would be willing to tell others): 1) “It is okay for a husband to beat his wife to discipline her”, 2) When a man beats his wife, he is showing his love for her”; 3) “A man has the right to beat/punish his wife” and 4) “A husband should force his wife to have sex when she does not want to.”
	Norms rejecting IPV	Equally weighted index from four questions from the personal beliefs on husbands right to use violence sub-scale of the “Social norms and beliefs about gender-based violence scale” (Perrin et al. 2019) – with response options: 1 (none of them), 2 (a few of them), 3 (about half of them), 4 (most of them) and 5 (all of them): 1) “How many of the people whose opinion matters most to you think that when a man beats his wife, he is showing his love for her?”; 2) “How many of the people whose opinion matters most to you think that a man has the right to beat/punish his wife?”; 3) “How many of the people whose opinion matters most to you think it is okay for a husband to beat his wife to discipline her?”; (4) “How many of the people whose opinion matters most to you expect a husband to force his wife to have sex when she does not want to?”
	Attitudes rejecting FGM	Equally weighted index from three questions on attitudes regarding FGM – ranging from 1 (strongly disagree) to 4 (strongly agree): 1) “It is important to circumcise girls so that they remain virgins until they marry” and 2) “The practice of circumcising girls should be abandoned in Senegal; and 3) Regardless of what the law says, girls should be circumcised.”

SRH	Attitudes supporting contraceptives	Equally weighted index from two questions on attitudes regarding contraceptives – ranging from 1 (strongly disagree) to 4 (strongly agree): 1) “ <i>Women who use contraception may become promiscuous</i> ” and 2) “ <i>Using contraceptives violates my religious beliefs.</i> ”	
	Fertility ideals	Total number of desired children, reverse coded so that higher score is lower fertility desires.	
Panel C: Behavior indicators			
Domain	Indicator	Description and construction of the variable	Relevant sample
VAWG	Freedom from controlling behaviors	Binary indicator created from a total of 5 questions following the WHO modified conflict tactics scale with all questions responding yes, no or don’t know/refuse. Please tell me if these apply to your relationship (past relationship) with your husband or partner in the last 12 months: 1) <i>He is (was) jealous or angry if you talk (talked) to other men?</i> 2) <i>He accuses (ed) you of being unfaithful?</i> 3) <i>He did (does) not let you meet your female friends?</i> 4) <i>He tries(d) to limit your contact you’re your family?</i> 4) <i>He insists(d) on knowing where you are (were) at all times?</i> Indicator = 1 if all responses are no. All acts are coded as missing if any act is “don’t know/refuse” and all other acts are responded as no or if all questions are “don’t know/refuse.”	Respondents currently in a relationship, or in the last 12 months; N=2892
	Freedom from emotional IPV	Binary indicator created from a total of 5 questions following the WHO modified conflict tactics scale with all questions responding yes, no or don’t know/refuse. Please tell me if these apply to your relationship (past relationship) with your husband or partner in the last 12 months: 1) <i>He (does/did) things to scare or intimidate you on purpose, by the way he looked at you, by yelling or smashing things?</i>, 2) <i>He (does/did) not trust you to spend money?</i>, 3) <i>He said something to humiliate you in front of others</i>, 4) <i>He (threatens/threatened) to hurt or harm you or someone that you care about?</i> 5) <i>He (insults/insulted) you or made you feel bad about yourself ?</i> Indicator = 1 if all responses are no. All acts are coded as missing if any act is “don’t know/refuse” and all other acts are responded as no or if all questions are “don’t know/refuse.”	
	Freedom from physical IPV	Binary indicator created from a total of 7 questions following the WHO modified conflict tactics scale with all questions responding yes, no or don’t know/refuse. Please tell me if these apply to your relationship (past relationship) with your husband or partner in the last 12 months: 1) <i>Push you, shake you, or throw something at you ?</i>, 2) <i>Slap you ?</i>, 3) <i>Twist your arm or pull your hair ?</i>, 4) <i>Punch you with his fist or with something that could hurt you ?</i>, 5) <i>Kick you, drag you, or beat you up?</i>, 6) <i>Try to choke you or burn you on purpose ?</i>, 7) <i>Threaten or attack you with a knife, gun, or sharp object or other weapon ?</i> Indicator = 1 if all responses are no. All acts are coded as missing if any act is “don’t know/refuse” and all other acts are responded as no or if all questions are “don’t know/refuse.”	
	Freedom from sexual IPV	Binary indicator created from a total of 3 questions following the WHO modified conflict tactics scale, with all questions	

		responding yes, no or don't know/refuse. Please tell me if these apply to your relationship (past relationship) with your husband or partner in the last 12 months: 1) <i>physically forced you to have sexual intercourse with him when you did not want to</i>, 2) <i>Physically force you to perform any other sexual acts you did not want to?</i>, 3) <i>Force you with threats or in any other way to perform sexual acts you did not want to?</i> Indicator = 1 if all responses are no. All acts are coded as missing if any act is "don't know/refuse" and all other acts are responded as no or if all questions are "don't know/refuse."	
	IPV disclosure: told anyone	Binary variable =1 if respondent told anyone about experiencing IPV in the last 12 months.	
	IPV disclosure: sought help	Binary variable =1 if respondent sought help to stop IPV from happening in the last 12 months.	
	Freedom from non-partner sexual harassment	Binary indicator created from a total of 8 questions, with all questions responding yes, no or don't know/refuse. Has anyone in the last 12 months: 1) <i>Whistled, called or hooted at you in a sexual way?</i>, 2) <i>Made gestures or used body language of a sexual nature which embarrassed or offended you?</i>, 3) <i>Made sexual comments or offensive remarks about your appearance, body or sexual stories or jokes that were offensive?</i>, 4) <i>Stared, leered or ogled you in a way that made you feel uncomfortable?</i>, 5) <i>Touched you in a way that made you feel uncomfortable or exposed themselves in front of you in a way that made you feel uncomfortable?</i>, 6) <i>Made unwelcome attempts to establish a romantic or sexual relationship with you—despite your efforts to discourage it?</i>, 7) <i>Tricked, threatened or blackmailed you, or physically forced you to have sexual intercourse when you did not want to ?</i>, 8) <i>Tricked, threatened or blackmailed you, or physically forced you to perform any other sexual acts you did not want to, including forcing you to kiss them or touch yourself ?</i> Indicator = 1 if all responses are no. Indicator is coded as missing if any act is "don't know/refuse" and all other acts are responded as no or if all questions are "don't know/refuse."	All
	Freedom from non-partner physical violence	Binary indicator created from a total of 4 questions, with all questions responding yes, no or don't know/refuse. Has anyone in the last 12 months: 1) <i>Forced you to work excessively against your will ?</i>, 2) <i>With held food from you, did not allow you to eat, starved you, or forced you to eat things that you did not want to?</i>, 3) <i>Slapped you, pushed or punched you, shook you, or throw something at you, pushed you, grabbed your arm, pulled your hair, crushed your fingers or hands, punched or kicked you?</i>, 4) <i>Beat you or attacked you with a weapon, cut you, dragged you, tried to strangle or suffocate you or burned you?</i> Indicator = 1 if all responses are no. Indicator is coded as missing if any act is "don't know/refuse" and all other acts are responded as no or if all questions are "don't know/refuse."	

	Freedom from non-partner emotional violence	Binary indicator created from a total of 6 questions, with all questions responding yes, no or don't know/refuse. Has anyone in the last 12 months: 1) <i>Screamed at you, either when you were alone or in front of others ?</i> , 2) <i>Excessively criticized you or insulted you, ether when you were alone or in front of others?</i> , 3) <i>Threatened to hurt you or one of your children ?</i> , 4) <i>Spread false rumors about you or one of your children?</i> , 5) <i>Ignored you and refused to talk to you, intentionally left you out or did not allow you to do things you wanted to ?</i> , 6) <i>Taken or stolen, broke or ruined your belongings?</i> Indicator = 1 if all responses are no. All acts are coded as missing if any act is “don't know/refuse” and all other acts are responded as no or if all questions are “don't know/refuse.”	
	Freedom from FGM	Binary indicator=1 if respondent does not have a living daughter that has undergone circumcision.	Respondents with daughters; N=1,934
	Intervene	Binary indicator=1 if respondent would intervene in the case of a neighbor's physical IPV.	All
	Never married or cohabited	Binary indicator=1 if respondent has never been married or cohabited.	Adolescents (≤19 years at baseline)
SRH	Condom use	Binary indicator=1 if respondent used a condom in the last sexual intercourse	Subsample that are sexually active, N=2748
	Currently using modern contraceptives	Binary indicator=1 if respondent reports using one or more modern methods currently to avoid becoming pregnant.	Subsample that are sexually active, N=2790
	HIV test	Binary indicator=1 if respondent tested for HIV last 12 months.	All
	No herpes	Binary indicator=1 if respondent has not had genital sore or ulcer in the last 12 months (recall is 6 months at baseline).	
	No chlamydia	Binary indicator=1 if respondent has not had bad-smelling abnormal genital discharge in the last 12 months (recall is 6 months at baseline).	
	Never sexually debut	Binary indicator= 1 if respondent has not yet sexually debuted.	Adolescents (≤19 years at baseline)
	Never given birth and not currently pregnant	Binary indicator=1 if respondent never given birth and not currently pregnant or pregnant in the last 12 months.	
Panel D: Indicators for heterogeneity analysis			
Domain	Indicator	Description and construction of the variable	
Marital status	Never married	Never married (in comparison to cohabitation, married, including polygynous marriage, or separated/divorced/widowed).	
Conformity and self-direction	Conformity	Index created through principal component analysis of three question capturing the degree to which and individual would constrain choices based on upsetting or violating a social norm (e.g. <i>It is important to Awa to always behave properly. She wants to avoid doing anything people would say is wrong. How much are you like this person?</i>). Responses range from 1 (not at all like me) to 6 (very much like me) and the alpha value for the unbalanced baseline – endline panel sample = 0.802.	

	Self-direction	Index created through principal component analysis of three questions capturing how likely the individual is to think and act independently and act on own decisions (e.g. <i>It is important to Youma to make her own decisions about what she does. She likes to be free to plan and to choose what to do herself. How much are you like this person?</i>). Responses range from 1 (not at all like me) to 6 (very much like me) and the alpha value for the unbalanced baseline – endline panel sample = 0.839.
Transportation	Identification with characters and story line	Index created through principal component analysis of five questions capturing engagement with the film clubs (e.g. <i>I was affected emotionally or I could imagine being part of the story</i>). Responses range from 1 (disagree) to 3 (agree) and the alpha value for the unbalanced baseline – endline panel sample = 0.828.
Social desirability	Social desirability	Index of ten questions from the Marlowe Crowne social desirability scale created through principal component analysis capturing how likely an individual is to want to motivation to conform with socially accepted actions (e.g. <i>I am always courteous, even to people who are disagreeable.</i>). Two items were dropped from the original scale, one was dropped during piloting as it was poorly understood in the Senegalese context, and the other as it demonstrated poor fit with the overall underlying index. Responses are dichotomized to disagree (0) or agree (1) and the alpha value for the unbalanced baseline – endline panel sample = 0.773.

* all indicators for heterogenous effects measured at baseline with the exception of “transportation.”

B.7. Trial registration and pre-analysis plan

The evaluation's trial registry and pre-analysis plan were submitted to the American Economics Association's (AEA) registry for RCTs in December 2019: "The impact of an entertainment education TV series '*C'est la vie!*' on gender-based violence and sexual and reproductive health (AEARCTR-0005134). After the COVID-19 pandemic, we submitted modifications in June 2020 describing major changes to the design of the trial. These included: 1) documentation of discontinuation of the film clubs, 2) plans to extend the content of the series via a podcast intervention and 3) plans to implement a short (reduced set of outcomes) in a midline phone survey to capture immediate effects of the intervention. Because of uncertainties around the timing and the ability to conduct a final in-person surveys and measure behavior outcomes, the revised pre-analysis plan only describes the analysis plans attached to the midline (phone) survey. Nonetheless, we follow the same protocols for endline analyses that are specified in the pre-analysis plan. This includes the types of models run, the control variables used, the outcome indicators and their construction, the heterogeneity analysis and other robustness checks. The major deviations from the original plans are described below.

Level of geographic fixed effects: In all regressions, we control for department geographic fixed effects, rather than region fixed effects (as pre-specified in our pre-analysis plan), as these allow more precise controls for cultural and socio-economic status variations and align closer with the unit of implementation (facilitator variation).

Heterogenous effects: In our pre-analysis plan, in addition to heterogeneous effects by marital status, conformity, self-direction and transportation, we also pre-specified heterogenous effects by an index of tradition. This index was meant to measure how bound participants were by their cultural and religious values and traditions. For example, "*Religious belief is important to Fatou. She tries hard to do what her religion requires. How much are you like this person?*") with responses range from 1 (not at all like me) to 6 (very much like me). However, exploratory factor analysis showed that the indicators used to measure tradition did not perform well in our setting (alpha score of 0.553), thus we do not include them in the analysis. This decision was also pre-specified in our pre-analysis plan, which indicated that items that were not well understood or internally consistent would be dropped from the analysis.

Coding of knowledge outcomes: For all knowledge outcomes which relied on participants answering a correct number of responses (e.g. adverse consequences for child marriage or HIV prevention strategies), we provided response options in questionnaires. However, to ensure we did not miss any possible knowledge gains, we also included "other, specify" as a response option. We did not pre-specify how we

would code these responses, however in some cases, they changed the coding and distribution of knowledge scales. For example, “other, specify” responses were either recoded to existing response categories, or new response categories were created if we felt that the response was valid, but missing from our original pre-coded responses. For example, we added a category “adverse sexual health and pleasure” to response options regarding the possible adverse consequences for FGM. This was not a response option listed, but mentioned frequently and validated by research as a relevant and important adverse consequence of FGM. While in theory, the effects of these changes are neutral across treatment arms, to control for any bias this might introduce by creating an indicator that equals one if a particular observation was recoded and this recoding resulted in a change in the total knowledge score for that observation. We do this separately for each wave and control for “recoding” indicators in regressions for the relevant knowledge outcomes.

Analysis of maternal and child health outcomes: In our pre-analysis plan, maternal and child health was a third theme and topic of interest for the series. However, we acknowledged trade-offs and the likelihood of being underpowered to analyze these outcomes because we prioritized adolescent girls as part of the sample who would not yet have given birth and because the overall proportion of the sample likely to become pregnant in the time span of the survey was likely to be low. In the midline survey, behaviors were not collected, however in the endline survey, the sample of adolescent girls and young women that responded to the maternal and child health behavior questions is a select sample (either those currently pregnant or those have given birth in the 12 months proceeding the survey, $n = 685$). Thus we do not analyze these outcomes due to lack of power.

Analysis of secondary outcomes: In our pre-analysis plan, we pre-specified a series of secondary outcomes related to dynamics around adolescent girls and young women gathering for social activities (viewing the series in a group, building social capital, networks and having additional leisure time). The rationale for these secondary outcomes was to see if wellbeing improvements could accrue simply because participants were given a structured outlet to connect with others, in a setting where this opportunity is rare. These outcomes include indices of personal relationships, social support and trust, emotional wellbeing and gender equitable attitudes. We collected these outcomes in hope that a fourth study arm could be added as a pure control (no placebo films or gatherings) in follow-up waves using the remaining 40 sampled villages from the listing survey. These villages were randomized to a fourth study arm, however no additional funds were available or identified to allow the study team to add them. Thus, given we were not designed to measure impacts from this pathway, we do not analyze these secondary outcome indicators (and have not run analysis on them at the time of writing this paper).

Appendix B: References

- Perrin, N., Marsh, M., Clough, A., Desgroppes, A., Yope Phaniel, C., Abdi, A., Kaburu, F., Heitmann, S., Yamashina, M., Ross, B., Read-Hamilton, S., Turner, R., Heise, L., & Glass, N. (2019). Social norms and beliefs about gender based violence scale: A measure for use with gender based violence prevention programs in low-resource and humanitarian settings. *Conflict and Health*, 13(1), 6. <https://doi.org/10.1186/s13031-019-0189-x>
- World Health Organization. (2001). *Putting women first: Ethical and safety recommendations for research on domestic violence against women* (WHO/FCH/GWH/01.1). World Health Organization. <https://apps.who.int/iris/handle/10665/65893>
- World Health Organization. (2016). *Ethical and safety recommendations for intervention research on violence against women: Building on lessons from the WHO publication putting women first: ethical and safety recommendations for research on domestic violence against women*. World Health Organization. <https://apps.who.int/iris/handle/10665/251759>

ALL IFPRI DISCUSSION PAPERS

All discussion papers are available [here](#)

They can be downloaded free of charge

INTERNATIONAL FOOD POLICY RESEARCH INSTITUTE

www.ifpri.org

IFPRI HEADQUARTERS

1201 Eye Street, NW
Washington, DC 20005 USA
Tel.: +1-202-862-5600
Fax: +1-202-862-5606
Email: ifpri@cgiar.org