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Entertainment, Education, and Attitudes Toward Domestic Violence†

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Over one-third of women around the world are victims of physical or sexual violence (World Health Organization 2013). Many of them live in low income countries where individuals are often socialized to accept and tolerate gender based violence (GBV). GBV has serious consequences for women's mental and physical well-being and significant resources are invested in policies to change such attitudes and behaviors. In this paper we evaluate an innovative approach that uses entertainment television to reduce GBV.

Entertainment education ("edutainment") is a communication strategy that works through mass entertainment media with the aim of promoting a better context for behavior change than the delivery of information alone. We experimentally evaluate season 3 of the edutainment TV series *MTV Shuga*, produced by MTV Staying Alive Foundation and filmed in Nigeria. *Shuga* 3 consists of eight episodes of 22 minutes each. While the main focus of the series is HIV, a subplot involves a married couple with a violent husband.[1] In this paper we focus on this theme and assess the impact of *Shuga* on attitudes toward domestic violence. We find broadly positive effects. Moreover, the effect seems to be concentrated among people who recall the show and the narrative around the characters well, consistent with the idea of edutainment.

We contribute to the nonexperimental literature on the impact of commercial TV on gender outcomes (e.g., Chong and La Ferrara 2009; Jensen and Oster 2009; La Ferrara, Chong, and Duryea 2012; Kearney and Levine 2015) and to recent experimental work that uses edutainment for public policy (e.g., Banerjee, Barnhardt, and Duflo 2015; Ravallion et al. 2015; Berg and Zia 2017). We differ from the latter in focusing on changing norms toward GBV.

I. Experiment and Data

To evaluate the impact of *MTV Shuga* we conducted a randomized controlled trial. We set up 80 screening centers in urban and peri-urban locations of 7 towns in South West Nigeria and invited to a movie showing a random sample of individuals aged 18–25 who lived within a 10 minute walk from each center. Among the attendees we randomly selected 63 people per center (equally divided between men and women) to take part in two subsequent screenings. For these two screenings we randomized centers into 54 that showed *Shuga* (treatment) and 26 that showed a "placebo" TV series (control). In both cases the screenings contained four episodes each and were one week apart, during September–December 2014, immediately after the baseline. We collected the follow-up survey eight months after the baseline.

We elicited information on attitudes toward GBV using the following questions. First, we asked if a husband is justified in forcing his wife to have sex when she does not want to. Second, we asked if a man is justified in hitting or beating his wife if she (i) goes out without telling him; (ii) neglects the children; (iii) argues with him;

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[1] For an evaluation of the impact of *MTV Shuga* on HIV-related outcomes, see Banerjee, La Ferrara, and Orozco (2018).

Table 1—Impact on GBV Indexes

Dependent variable (Y_t):	Justify violence (count)			Justify violence (dummy)		
	Full sample (1)	Females (2)	Males (3)	Full sample (4)	Females (5)	Males (6)
Treated	−0.131	0.004	−0.268	−0.023	0.017	−0.055
	(0.088)	(0.085)	(0.121)	(0.017)	(0.019)	(0.022)
Y_{t-1}	0.236	0.201	0.296	0.260	0.262	0.251
	(0.017)	(0.024)	(0.027)	(0.018)	(0.025)	(0.027)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Mean dependent variable in control group	0.626	0.645	0.609	0.263	0.269	0.257

Notes: The dependent variable in columns 1–3 is the number of instances in which the respondent considers forced sex or wife beating justifiable; in columns 4–6 is an indicator for whether such number is greater than 0. Columns 1–3 report estimated Poisson coefficients; columns 4–6 marginal probit coefficients. Standard errors in parentheses clustered at the screening center level. All regressions include town fixed effects and individual controls.

(iv) refuses to have sex; (v) burns the food; (vi) fails to prepare food on time; and (vii) refuses to have another child. We create an indicator for each response and construct two outcome variables. The first, "*Justify violence* (*count*)," is the sum of all indicators and ranges from 0 to 8. The second, *Justify violence* (*dummy*), is an indicator for whether there is at least one instance in which the respondent considers forced sex or wife beating justifiable.[2]

II. Impact

We estimate the following regression:

$$(1) \qquad y_{ilc1} = \beta Treated_{ilc0} + \gamma y_{ilc0} + \mathbf{X}'_{ilc0}\boldsymbol{\zeta} + \delta_c + \varepsilon_{ilc1},$$

where y_{ilct} is the outcome for individual i living in location l in city c, measured at baseline ($t = 0$) and follow-up ($t = 1$); $Treated_{ilc0}$ is an indicator for being assigned to watch *Shuga*; $\mathbf{X}_{ilc0}$ is a vector of controls measured at baseline; and δ_c indicates town fixed effects.[3] We estimate (1) using a Poisson model when the outcome is a count, and Probit when it is an indicator, clustering standard errors at the screening center (location l) level.

Table 1 reports the estimates of $\hat{\beta}$. The dependent variable in columns 1–3 is *Justify violence* (*count*), while in columns 4–6 it is *Justify violence* (*dummy*). A negative value of $\hat{\beta}$ indicates an improvement in attitudes, i.e., less support for GBV.

In the full sample the effect of treatment on the number of instances in which violence is justified is negative, consistent with the message of *Shuga*, but insignificant. There is, however, substantial heterogeneity across genders: while for women the effect is a precisely estimated zero, for men the coefficient is negative and significant at the 5 percent level.[4] To assess the magnitude, we can consider the incidence-rate ratio (IRR) of *Treated*, that is the ratio of the expected count for the treated group to that of the control, holding other variables constant.[5] The IRR associated with the coefficient −0.268 in column 3 is 0.76, meaning that—ceteris

[2] While the above questions are widely used in the literature, they may be affected by reporting bias, generating concerns of experimenter demand effects. We think the risk is moderate in our setting. The main educational component of *Shuga* was clearly about HIV, so the possible reporting bias on GBV is likely similar across treatment and control. Furthermore, in ongoing work we use item list techniques to estimate the impact of *Shuga* on violence experienced and we find similar results.

[3] Controls **X** include: gender, age, education, enrolled in school, single, Muslim, speaking Yoruba, speaking English as main or second language at home, not living with one's parents, household size, wealth, homeownership, and father or mother with more than secondary education.

[4] The coefficients are virtually identical (e.g., −0.255 for men) if we include a second order polynomial in the lag of the dependent variable.

[5] The IRR is obtained by exponentiating the estimated Poisson coefficient.

paribus—for individuals exposed to *Shuga* the number of instances in which violence is justified is about three-fourths of that for individuals not exposed. The effect is found also at the extensive margin (column 6): treated men have a 6 percentage points lower probability of justifying forced sex or wife beating, that is a 21 percent decrease over the mean of the control group.

III. Measuring Memory and Identification with Characters

To shed light on the workings of edutainment, in our follow-up survey we collected detailed information on what viewers remembered about the plot and the characters. Questions about *Shuga* were only asked to the treatment group, as the control could not possibly know, so this part of the analysis is restricted to the treated sample. Table 2 reports descriptive statistics.

First, we asked about the main themes of the show. About 8 percent of respondents indicated "violence in relationships" as a main theme, with men being slightly more likely to indicate this than women. This is consistent with the limited time dedicated to the GBV subplot in the three-hour season: most respondents correctly identified HIV as the "main" theme.

We then prompted respondents about the two characters that embedded the GBV theme in *Shuga*: Malaika and Nii. Malaika is a young woman who is enrolled in university and is married to Nii, a businessman who is very jealous and limits his wife's freedom. Nii would like to have a child, while Malaika wants to finish her studies first. They argue over this and Malaika hides that she is taking contraceptives, until the moment Nii finds out and beats her. Toward the end of the series, Malaika gets pregnant and tries to procure herself an abortion, ending up in the hospital with serious complications.

We showed respondents pictures of the characters in *Shuga* and asked: "Since you saw the movie, have there been times during which you remembered a specific character or scene from the program? Which ones?" The variables *Thought of Malaika* and *Thought of Nii* in Table 2 take value one for respondents who indicated Malaika/Nii, and zero otherwise. Approximately 60 percent of women and 50 percent of men report that they thought of Malaika (significantly different), while for Nii the shares are 26 and 24 percent.

Table 2—Memory and Identification with Characters, Summary Statistics

	Full sample	Females	Males	Diff (p-val)
Shuga theme: Violence in relationships	0.077	0.067	0.087	0.018
Thought of Malaika	0.551	0.598	0.505	0.000
Thought of Nii	0.246	0.256	0.238	0.177
Remembers what happened to Malaika	0.585	0.580	0.589	0.640
Remembers what happened to Nii	0.474	0.452	0.495	0.029
Identifies with Malaika	—	0.094	—	—
Identifies with Nii	—	—	0.014	—

Notes: Share of respondents who comply with the statements in each row. Column 4 reports the p-value for the test that the difference between columns 2 and 3 is 0.

We then showed respondents a picture of each character and asked what was the most significant thing they remembered about that character. *Remembers what happened to Malaika* takes value one for respondents who mention relevant facts (e.g., "her husband was beating her," "she tried to have an abortion," etc.) and zero for those who do not remember. About 58 percent of men and women remember what happened to Malaika. *Remembers what happened to Nii* is 1 when respondents mention things like "he was beating his wife," "he did not want to use birth control," etc. and 0 when they do not remember. About 50 percent of the men and 45 percent of the women remember facts about Nii.

Finally, we showed pictures of the characters on a tablet and asked respondents which of those people they "saw themselves as." We denote these variables as *Identify with Malaika* (for women) and *Identify with Nii* (for men). Only 1.4 percent of the men identify with Nii—not surprisingly, as he was a negative character in the show. About 9 percent of the women identify with Malaika.

IV. Memory, Identification, and GBV

According to psychological theory, the effects of the edutainment should be mediated by the extent to which viewers' attention is captured by the characters and viewers can take the characters' perspective (Singhal and Rogers 2012). Therefore, we estimate the relationship

Table 3—Memories of the Show and GBV Attitudes

Dependent variable: Justify violence (count)	Full sample		Females		Males	
	(1)	(2)	(3)	(4)	(5)	(6)
Shuga theme: Violence in relationships	−0.153	−0.098	−0.115	−0.068	−0.194	−0.157
	(0.153)	(0.156)	(0.224)	(0.217)	(0.160)	(0.162)
Thought of Malaika	−0.429	−0.432	−0.287	−0.292	−0.791	−0.696
	(0.084)	(0.087)	(0.103)	(0.101)	(0.158)	(0.166)
Thought of Nii	−0.307	−0.280	−0.141	−0.129	−0.620	−0.525
	(0.107)	(0.107)	(0.121)	(0.123)	(0.171)	(0.167)
Remembers what happened to Malaika	−0.401	−0.332	−0.264	−0.223	−0.602	−0.493
	(0.075)	(0.078)	(0.105)	(0.104)	(0.157)	(0.162)
Remembers what happened to Nii	−0.390	−0.321	−0.215	−0.173	−0.645	−0.541
	(0.087)	(0.084)	(0.121)	(0.121)	(0.169)	(0.156)
Identification with Malaika			0.025	0.009		
			(0.217)	(0.213)		
Identification with Nii					0.613	0.582
					(0.451)	(0.353)
Controls	No	Yes	No	Yes	No	Yes

Notes: The dependent variable is the number of instances in which the respondent considers forced sex or wife beating justifiable. The table reports estimated Poisson coefficients. Each coefficient is from a different regression, where the independent variable of interest is the one listed in each row. All regressions include the lagged dependent variable and town fixed effects; columns 2, 4, and 6 also include individual controls.

between the proxies for memory and identification described above and respondents' attitudes toward GBV at follow-up. This relationship cannot be interpreted as causal because the extent to which someone remembers or identifies with Malaika and Nii is likely correlated with their attitudes toward violence. However, it should be noted that we always control for the baseline value of the dependent variable. Also, we will compare estimates when including or not individual controls, to gauge the extent of the potential endogeneity. Our results are reported in Table 3.

Each coefficient in the table is estimated from a different regression, where the dependent variable is *Justify violence* (*count*) and the independent variable of interest is the binary variable listed by row.[6] Town fixed effects are always included, while socioeconomic controls (the same as in Table 1) are included in even-numbered columns but not in odd-numbered ones.

We find that eight months after viewing *Shuga*, attitudes toward GBV are not significantly different for viewers who indicate domestic violence as a main theme. Viewers who say that they have occasionally "thought about" either character (*Thought of Malaika/Nii*) and those who remember specific facts about them (*Remembers what happened to Malaika/Nii*) display significantly lower support for domestic violence, with most coefficients being significant at the 1 percent level. The effects are quite large, with IRR's of 0.75 for women who thought of Malaika (column 4) and 0.59 for men who thought of Nii (column 6). This means that the number of instances in which violence is justified by women and men who thought of the respective character is, in order, about three-fourths and two-thirds of that of respondents who did not. The effects are qualitatively similar at the extensive margin (not reported), with these viewers having an 8 to 10 percent lower probability of justifying GBV.

Remembering facts that happened to the two characters is also significantly correlated with outcomes at follow-up. The corresponding IRR's are around 0.8 and 0.6 for women and men, respectively. The probability of justifying violence is about 7 to 9 percentage points lower for these viewers (estimates not reported). Interestingly, identification with the characters is not significantly correlated with attitudes toward

[6] We obtain entirely consistent results when using "*Justify violence* (*dummy*)" as an outcome.

GBV, except perhaps for men: men who identify with Nii are, not surprisingly, less bothered by domestic violence. Note that all coefficients in Table 3 are very similar with and without the inclusion of observable individual characteristics.

In interpreting these estimates recall that we found a zero treatment effect on women. Combined with the fact that greater recall predicts more negative attitudes toward GBV even among women, this suggests the possibility of reverse causality that is not fully purged by controlling for observable individual characteristics (including baseline attitudes). Note, however, that the effect of recall is much larger for men, and it is for men that treatment has a causal effect. One way to interpret these results is that the stronger effect of recall on men reflects the causal effect of memory on their reaction to *Shuga*, though we acknowledge that this is speculative.

V. Conclusions

Despite the fact that domestic violence was a secondary theme of *MTV Shuga*, we have shown that (random) exposure to this educational TV series induced an improvement in men's attitudes toward women eight months later. Using a detailed set of measures of viewers' memories of the characters and identification with them, we also find that attitudes toward GBV significantly improve for men and women who report occasionally thinking about the characters and who remember specific facts about them. Identification with the characters seems to play a lesser role. These findings call for a deeper analysis of the links between attention, empathy and the policy impact of edutainment programs.

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