Entertainment, Education and Attitudes Towards Domestic Violence

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Over one third of women around the world are victims of physical or sexual violence (WHO, 2013). Many of them live in low income countries where individuals are often socialized to accept and tolerate gender based violence (GBV) and to remain silent about such experiences. GBV has serious consequences for women's mental and physical well-being and significant resources are invested in policies to change attitudes and behaviors in a direction that is more respectful of women. 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 sub-plot involves a married couple with a violent husband.[1] In what follows we focus on this theme and assess the impact of MTV Shuga on attitudes towards 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, which is consistent with the idea of edutainment.

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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).

We contribute to the non-experimental literature on the impact of commercial television 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 towards GBV.

I. Experiment and Data

To evaluate the impact of MTV Shuga, we conducted a randomized controlled trial before the show was widely distributed in Nigeria. We set up 80 screening centres 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 radius of approximately 10 minutes walk from each centre. Among those who attended the initial movie showing, we randomly selected about 63 people per centre (equally divided between men and women) to take part in two subsequent screenings. We randomized at the screening centre level to determine whether participants would watch MTV Shuga or the 'placebo' TV series *Gidi Up*, which portrayed a similar setting (urban Nigeria) but no educational message. In both cases the eight episodes were bunched in two groups of four episodes, for a total screening time of about 90 minutes per screening. The two screenings took place on weekends and were one week apart, during the period September-December 2014, immediately after the baseline survey. The follow-up survey was collected eight months after the baseline. The treatment group included 54 locations and the control group 26; outcomes and covariates are well balanced across treatment and control

arms.[2]

In our survey we elicited information on attitudes towards domestic violence using various questions, mainly derived from the domestic violence module of the Nigeria Demographic and Health Survey. To all respondents, male and female, we asked two types of questions. The first is a question on whether a husband is justified in forcing his wife to have sex with him when she doesn't want to. The second is a set of questions on whether 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, (iv) refuses to have sex, (v) burns the food, (vi) fails to prepare food on time, and (vii) refuses to have another child. From all these responses we create indicator variables for whether the respondent finds beating or forced sex acceptable, and we construct two outcome variables. The first is an aggregate index, '*Justify violence (count)*', which is the sum of all indicators. This index ranges from 0 to 8, and a one-unit increase can be interpreted as one more instance in which the respondent considers beating or forced sex acceptable. The second outcome, which we denote as '*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.

While the above questions on justifying violence are widely used in the literature on GBV, they may be affected by reporting bias, generating the concern that our results may reflect experimenter demand effects. We do not think this is a major problem in our setting for two reasons. First, the main educational component of Shuga was clearly about HIV, so the possible reporting bias on variables related to GBV is likely to be similar across treatment and control groups. Second, in ongoing work (Banerjee, La Ferrara and Orozco, 2019) we estimate the impact on the experience of violence by women and perpetration of violence by men using item list techniques and we find similar results.

[2]Outcomes are perfectly balanced in the full and in the female sample. The dependent variable is slightly unbalanced in the male sample, but the normalized difference is only 0.06, quite small compared to benchmark thresholds in the literature. We control for the lag of the dependent variable in all specifications.

II. Impact

To estimate the impact of exposure to Shuga on GBV outcomes, we estimate the following regression:

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

where y_{ilct} is the outcome for individual i living in location l in city c, measured at time t ($t = 0$ is baseline and $t = 1$ is follow-up); $Treated_{ilc0}$ is an indicator for being assigned to watch Shuga; $\mathbf{X}_{ilc0}$ is a vector of controls measured at baseline, including: 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; δ_c indicates town fixed effects. 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 centre (location l) level.

[Insert Table 1 about here]

Table 1 shows the estimated coefficients $\widehat{\beta}$ from equation (1). The dependent variable in columns 1-3 is '*Justify violence (count)*', while in columns 4-6 it is '*Justify violence (dummy)*'. Given our definition of the outcomes, a negative value of $\widehat{\beta}$ indicates an improvement in attitudes (less support for GBV). In the full sample (column 1) the effect of treatment on the number of instances in which violence is justified is negative, consistent with the message of Shuga, but not statistically significant. There is, however, substantial heterogeneity across genders: while for women the effect is a precisely estimated zero (column 2), for men the estimated coefficient is negative and significant at the 5 percent level (column 3).[3] To assess the magnitude of the effect, we can consider the incidence-rate ratio (IRR) of the variable *Treated*, that is the ratio of the expected count of our outcome for the treated group to that of the control group, holding other controls constant.[4] The IRR as-

[3]The coefficient is virtually identical (-0.255) if we include a second order polynomial in the lag of the dependent variable.

[4]The Poisson regression coefficient of a regressor X measures by how much the difference in the logs of expected counts

sociated to the coefficient -0.268 in column 3 is 0.76, meaning that –ceteris paribus– for individuals exposed to Shuga the count of the number of instances in which forcing sex or beating one's wife is justified is about $3/4$ of that for individuals not exposed to Shuga. Column 6 confirms that the effect is found also at the extensive margin: treated men have a 6 percentage points lower probability of justifying violence, that is a 21 percent decrease over the average propensity in the control group.

III. Measuring memory and identification with characters

To shed light on the workings of the edutainment component of the show, in our follow-up survey we collected detailed information on what viewers remembered about the plot and on their memory and identification with the characters.[5] Questions about Shuga were only asked to the treatment group, as the control could not possibly know who the characters were, so this part of the analysis is restricted to the treated sample. Table 2 reports descriptive statistics on the variables we constructed.

[Insert Table 2 about here]

First of all, we asked respondents what the main themes were of the show they had watched eight months earlier. About 8 percent of them indicated 'violence in relationships' as a main theme (see the first row of the table), 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 3-hour season: most respondents correctly identified HIV as the 'main' theme in Shuga, and GBV was for the most part perceived as a lateral 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 attending university in Lagos and is married to Nii, a businessman who apparently looks affectionate but in reality severely limits his wife's freedom. He is very jealous and does not want her to hang out with her best friend, another university student. He would like Malaika to give him a child, while Malaika wants to finish her studies and postpone the moment when she becomes a mother. They increasingly argue over this and Malaika hides that she is taking contraceptives, until the moment Nii finds out and beats her up. Towards the end of the series, Malaika gets pregnant and tries to procure herself an abortion, ending up in the hospital with serious complications.

To measure whether viewers had thought about Malaika or Nii over the previous months, we showed them pictures of the various 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 character did you think about or which characters were in the scene?". The variables '*Thought of Malaika*' and '*Thought of Nii*' in Table 2 take value 1 for respondents who spontaneously indicate Malaika or Nii, respectively, and 0 otherwise. Approximately 60 percent of women and 50 percent of men report that they thought of Malaika (significantly different), while in the case of Nii the share of men and women mentioning him is 26 and 24 percent, respectively.

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

Finally, we asked a more demanding question in terms of emotional involvement, i.e., we showed pictures of the characters on a tablet to the respondents and asked which of those people they "saw themselves as". We indicate these variables as '*Identify with Malaika*' (for women)

is expected to change if we increase X by 1. Since the difference in logs corresponds to the log of the ratio, the IRR is obtained by exponentiating the estimated Poisson coefficient.

[5] To avoid priming respondents, this information was collected at the end of the follow-up survey.

and '*Identify with Nii*' (for men) in Table 2. Only 1.4 percent of the men identify with Nii – not surprisingly, as he was a rather negative character in the show. About 9 percent of the women, instead, identify with Malaika.

IV. Memory, identification and GBV outcomes

In section II we showed that exposure to Shuga reduced the propensity to justify forced sex and wife beating among men, but not among women. According to the psychological theory underlying edutainment, the effects 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, 1999). Therefore, we next estimate the relationship between the proxies for memory and identification that we described above and respondents' attitudes towards GBV as measured at follow-up. This relationship cannot be interpreted in a causal way because the extent to which someone remembers or identifies with Malaika and Nii is likely correlated with how sensitive they are to the topic of violence, which in turn may depend on their own attitudes. 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 including individual socioeconomic controls, to gauge the extent of the potential endogeneity problem. Our results are reported in Table 3.

[Insert Table 3 about here]

Each coefficient in Table 3 is estimated from a different regression, where the dependent variable is the index '*Justify violence (count)*' in Panel A, or '*Justify violence (dummy)*' in Panel B, and the independent variable of interest is the binary variable listed by row. 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 towards 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 (variables '*Thought of Malaika/Nii*') and those who remember specific facts about these characters (variables '*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 Malaika (column 6). This means that that the number of instances in which violence is justified by women and men who thought of the respective character is, in order, about $3/4$ and $2/3$ of that of respondents who did not think about those characters. The effects are qualitatively similar at the extensive margin, with these viewers having an 8 to 10 percent lower probability of justifying GBV.

Remembering facts that happened to the two characters is also negatively and significantly correlated with outcomes at follow-up. The IRR's corresponding to estimates in Panel A are around 0.8 and 0.6 for women and men, respectively. The probability of justifying violence (Panel B) is about 7 to 9 percentage points lower for these viewers. Interestingly, identification with the characters is not significantly correlated with attitudes towards domestic violence, except perhaps for men: men who identify with Nii are, not surprisingly, less bothered by GBV. It is worth noting that all the coefficients in Table 3 are very similar with and without the inclusion of observable individual characteristics.

In interpreting the coefficients in Table 3 recall that we found a reasonably precise zero treatment effect on women (Table 1). Combined with the fact that greater recall predicts a more negative attitude towards 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 (random) exposure to this educational TV series induced an improvement in men's attitudes towards women eight months later. Notably, it reduced the number of instances in which forcing one's partner to have sex or beating her was considered justifiable. Using a detailed set of measures of viewers' memories of the characters and identification with them, we also find that attitudes towards GBV show significant improvements for the people (both 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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Tables

Table 1: Impact on GBV indexes

Dep. Var.:	*Justify Violence (count)*			*Justify Violence (dummy)*		
	Full Sample	Females	Males	Full Sample	Females	Males
	(1)	(2)	(3)	(4)	(5)	(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
Log-Likelihood	-5493	-2798	-2619	-2501	-1254	-1217
Mean Dep Var in Control group	0.626	0.645	0.609	0.263	0.269	0.257

Notes. The dependent variable in cols 1-3 is the number of instances in which the respondent considers forced sex or wife beating justifiable; in cols 4-6 is an indicators for whether such number is >0. Cols. 1-3 report estimated Poisson coefficients; cols 4-6 marginal probit coefficients. Standard errors in parentheses clustered at the screening centre level. All regressions include town fixed effects and the following controls: female, age, currently attending school, years of education, English spoken as main or secondary language at home, single, does not live with with the family, household size, wealth index, home owner, father obtained higher than secondary education, mother obtained higher than secondary education, muslim, speaks Yoruba as a native language.

Table 2: Memory and identification with characters, summary statistics

	Full sample	Females	Males	Diff. (2)-(3) (p-value)
	(1)	(2)	(3)	(4)
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.

Table 3: Memories of the show and GBV attitudes

	Full sample		Females		Males	
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A - Dep. Var.: Justify violence (count)						
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)
Panel B - Dep. Var.: Justify violence (dummy)						
Shuga theme: Violence in relationships	-0.020	-0.007	-0.025	-0.016	-0.016	-0.013
	(0.028)	(0.028)	(0.045)	(0.044)	(0.031)	(0.030)
Thought of Malaika	-0.097***	-0.102***	-0.076***	-0.079***	-0.135***	-0.125***
	(0.020)	(0.019)	(0.024)	(0.024)	(0.027)	(0.025)
Thought of Nii	-0.082***	-0.078***	-0.061**	-0.060**	-0.106***	-0.097***
	(0.022)	(0.021)	(0.029)	(0.030)	(0.025)	(0.022)
Remembers what happened to Malaika	-0.086***	-0.076***	-0.071***	-0.066**	-0.098***	-0.089***
	(0.018)	(0.018)	(0.027)	(0.026)	(0.029)	(0.026)
Remembers what happened to Nii	-0.082***	-0.071***	-0.056*	-0.050*	-0.100***	-0.089***
	(0.018)	(0.018)	(0.029)	(0.028)	(0.028)	(0.026)
Identification with Malaika			0.014	0.011		
			(0.054)	(0.053)		
Identification with Nii					0.079	0.063
					(0.109)	(0.104)
Lag Dep. Var.	Yes	Yes	Yes	Yes	Yes	Yes
Controls	No	Yes	No	Yes	No	Yes

Notes. The dependent variable in Panel A is the number of instances in which the respondent considers forced sex or wife beating justifiable; in Panel B it is an indicators for whether such number is >0. Panel A reports estimated Poisson coefficients; Panel B marginal probit coefficients. Standard errors in parentheses clustered at the screening centre level. Each coefficient is from a different regression, where the independent variable of interest is the one listed in each row. All regressions include town fixed effects; columns 2, 4, 6 also include the controls listed in the note to Table 1.