IMPACT EVALUATION OF AN INTENSIVE JOURNALISM TRAINING ACTIVITY IN TANZANIA

FINAL REPORT

Prepared under Contract No. GS-10F-0033M / Order No. AID-OAA-M-13-00013, Tasking N061

DRG LEARNING, EVALUATION, AND RESEARCH (DRG-LER) ACTIVITY

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ACRONYMS

CSO	Civil Society Organization
DRG-LER	Democracy, Human Rights, and Governance Learning, Evaluation, and Research Activity
IAT	Implicit Association Test
IE	Impact Evaluation
IP	Implementing Partner
NGO	Non-governmental Organization
NORC	National Opinion Research Center
RCT	Randomized-controlled trial
SAUT	Saint Augustine University of Tanzania
SJMC	University of Dar es Salaam School of Journalism and Mass Communication
SMS	Short Message Service
TMCS	Tanzania Media and Civil Society Strengthening
UDSM	University of Dar es Salaam
USAID	United States Agency for International Development

EXECUTIVE SUMMARY

This report presents the findings from an impact evaluation (IE) of an intensive journalism training activity, which was designed through a collaborative process between the research team and USAID and then implemented under the USAID/Tanzania Media and Civil Society Strengthening (TMCS) Program; the IE design and implementation was conducted by NORC at the University of Chicago (hereafter "NORC") under the USAID Democracy, Human Rights, and Governance – Learning, Evaluation, and Research (DRG-LER) Activity contract. The activity aimed to train bachelor's degree and diploma students, who were in media studies programs, especially those majoring in journalism or mass communications, as well as public relations, on practical skills in producing radio content, and to reduce gender, age, and rural identities bias that often persist in Tanzanian media. The intensive journalism training activity was conducted by Internews, TMCS's implementing partner (IP).

The current media environment in Tanzania is characterized by state repression of independent media, a climate of self-censorship, lack of equipment and professional deficiencies among journalists, limited journalistic independence, and gender, age, and rural identities bias. However, there are also critical opportunities that can be leveraged to strengthen the media environment, including that there are a significant number of civil society organizations (CSOs) focusing on introducing women's and youth's voices into the media.

While many programs exist under the scope of USAID's Strengthening the Media and Information Environment Initiative, the intervention evaluated in this report is an intensive journalism training program conducted through the "Media and Civil Society Strengthening (TMCS) Program", known in Kiswahili as "*Boresha habari*". The intensive training activity was designed to train students (a) in practical investigative journalism for audio production and (b) on diversity and inclusion of gender, age, and rural/urban groups to strengthen their ability to produce higher quality content as well as more diverse and attractive content regarding rural, youth, and women's issues. The training activity had multiple learning units in this area. The training also included learning units on different news platforms, the role of internet and social media, how to edit and package a news story, and interviewing skills.

EVALUATION DESIGN

To evaluate the intensive journalism training activity, the NORC evaluation team launched a randomized-controlled trial (RCT). A total of 600 male and female Bachelor of Arts and Diploma students at accredited media studies programs (journalism, mass communication, and public relations) in the two academic institutions – University of Dar es Salaam School of Journalism and Mass Communication (SJMC) and Saint Augustine University of Tanzania (SAUT) in Mwanza were randomly assigned in equal numbers to the intervention group (*i.e.*, those who received the program) or the control group. To do this, we first stratified the students by gender, year in the program, university, and academic major, and then conducted the random assignment from each stratum. The purpose of this stratified random assignment was to ensure that students in both the Intervention and control groups are as similar as possible based on the aforementioned characteristics.

Because the students of most interest were those majoring in journalism and mass communications (rather than public relations), when stratifying on major, we ensured all journalism and mass communication students were in the study either in the intervention or the control group. A majority of

the students (60% in the intervention group and 59% in the control group) were journalism students and about 17% of the students were Mass Communication students. The public relations students "filled in the rest" of the slots for the two groups to achieve optimal comparability across the intervention (23%) and control (24% percent).

All students in the study received baseline assistance such as availability of and knowledge to use recording equipment, computers, and editing software, which were provided through USAID program funding and delivered by the IP. We find that this was largely successful, although there is room for improvement for instructing students on accessing and using recording equipment.

To gather data for the IE, the evaluation team administered a baseline survey and an accompanying implicit association test (IAT) in August – October 2019. An endline survey with intervention and control groups was conducted in November 2019 – January 2020. The survey aimed to assess (1) knowledge of audio production and (2) diversity and inclusion.

KEY FINDINGS

We find that the intensive training activity largely had a null effect on students' knowledge of practical journalistic practices, as well as ethics and gender diversity and inclusiveness, which was overall low. Student efficacy in producing high quality journalism, a secondary outcome of interest, was also unaffected – most students with and without the program exposure expressed a high degree of efficacy. Those who undertook the program did, however, express more interest in covering topics that included women and rural issues, while those who did not have the program expressed more interest in sports and entertainment (interest in youth, politics and the economy were similar in both groups). We found no differences in program effectiveness by gender or concentration within media studies.

Due to the COVID-19 pandemic, we were unable to engage students – both those who received and those who did not receive the training program – in a contest to produce radio segments. Originally, we planned to compare the quality of radio segments produced as another potential measure of program effects. The research team had been in discussions with the BBC (from the time of the scoping trip, and again after the endline), who expressed willingness to play the most successful segments produced, along with studio tours or other professional exposure for those students producing the successful segments. Further, the research team had planned to incentivize production by offering prizes (*e.g.*, a tablet). However, these discussions were still ongoing in February 2020; shortly thereafter, we needed to abandon planning for this part of the evaluation due to the pandemic.

This report concludes with an assessment, informed by data, as to why there were largely null program effects. We largely rule out concerns of spillover, attrition, non-compliance, statistical power. Instead, the null effect could imply a number of issues. First, it is possible that the target population for the program was inappropriate. Some of the students in the media studies concentration eventually specialize in journalism or mass communications, while others end up specializing in public relations. While those in the later years who specialized in journalism and mass communications were prioritized for inclusion in the study (about 60% of the study sample), public relations concentrated students were also included to meet the minimum number of study participants required for the evaluation. It is possible that the null effects are related to the inclusions of these students. Second, the curriculum, as was implemented, may not have been effective in having students retain knowledge after an intensive training program. Also, the curriculum was not standardized and different trainers were allowed to

deliver the training differently. This was done with the intention of having trainers further develop the materials themselves. While such trainings may be effective in some contexts, this approach was problematic for the impact evaluation, which relied on a common training program for the purpose of the evaluation. Finally, the evaluation could not assess practical implementation of skills through a comparison of radio segments produced by students. Perhaps, even if knowledge did not stick for a "test format" akin to the online survey, for example, students in the program may have been more likely to participate in producing a radio segment, or produced a higher quality radio segment. Such a behavioral output is arguably a very good test of the program effect, and we regret not being able to implement it.

RECOMMENDATION FOR FUTURE PROGRAMMING AND EVALUATION

We have identified a variety of potential causes for the program's null effects, and recommend the following best practices and lessons when designing future research into similar programs.

EVALUATION DESIGN RECOMMENDATIONS

- We recommend USAID take a coordinated approach to add to its learning agenda through the implementation and evaluation of its activities. The most scientifically rigorous and useful learning for future USAID programming can be achieved by coordinating and aligning the goals of different stakeholders that contribute to a common learning agenda. Given the increased time demands on the IP when implementing an activity being evaluated through an RCT, expectations regarding staff time commitment, consistency of implementation, requirements for access to beneficiaries to conduct surveys and/or testing, time allotted throughout program implementation to account for required research tasks and similar considerations should be clearly defined and agreed upon by the funding agency, the research team, and IP at the start of the project.

- For IEs such as this one that are undertaken from a learning perspective (as opposed to an accountability perspective) to test the effectiveness of a concept, the intervention should be jointly developed by the research team, the IP, and USAID along with subject matter and local country experts who can tailor training materials to the specific concept and context being evaluated for the learning purpose.

- Carefully consider access to technology in the local context when determining data collection strategies, and how it could serve as a barrier to participation. Despite the expansion of the internet in Tanzania, students had difficulty accessing the internet when they returned to their hometowns in the summer, which were often rural. IE designs need to include "defensive" measures to address such unanticipated issues, such as alternative modes of data collection or ensuring that key IE outcome measures are not solely dependent on a single data-collection mode.

IMPLEMENTATION RECOMMENDATIONS

- All training material and data collection instruments should be translated into the local language for all phases of implementation. Where issues are encountered during implementation, this prevents assessment and resolution of the issue being complicated by ambiguity as to the source of the issue being within the training material/data collection instrument or language comprehension.

- Limit the amount of variability in intervention content, and administer the intervention consistently to all participants (*i.e.*, ensure as much as possible that each beneficiary receives the identical intervention). Variability in the delivery of the intervention complicates analysis because differences in learning outcomes may be a result of the variability in the content of different training sessions.

- To replicate successful programs, well-documented curriculum, implementation details, including deviation from plans and non-adherence to the plans, is absolutely necessary. Additionally, if a program yields null results, such documentation helps in understanding what may have been responsible for some of the null results.

1. INTRODUCTION

As part of the DRG Learning, Evaluation, and Research (DRG-LER) Activity, USAID requested that NORC design and implement an impact evaluation (IE) of "an intensive journalism training program" for university students in Tanzania, which was a part of USAID/Tanzania's Media and Civil Society Strengthening (TMSC) Program. The multi-month intensive journalism training targeted bachelors and diploma students who were in journalism programs, especially those majoring in journalism or mass communications, as well as public relations, and aimed to strengthen their ability to produce higher quality audio content. This intervention fits under USAID's larger Strengthening the Media and Information Environment Initiative, which aims to increase the professionalization of journalists, connect the media to society, and strengthen the capacity of community radio.

The importance of a rich, professional, and independent media environment is widely recognized as a key ingredient of a functioning democracy. The media can act as a vehicle that elicits and communicates citizen voices to the government and investigates and makes citizens aware of the performance of the government. The media can only fulfill such a function if it does not systematically exclude portions of the population, historically, women, youth, the poor, and rural populations. Following independence, Tanzania had few local journalists and the reporting environment was highly restricted under a one-party regime. The media environment started to open in limited ways alongside the introduction of multiparty electoral competition during the 1990s and early 2000s. However, since the election of the recent government in 2016, the media environment has been closing. Prominent journalists have been harassed, tortured, and killed for criticizing the government, leading to a climate of self-censorship. Further, the ruling party has passed important pieces of legislation that restricts the activities of journalists.

In Tanzania, the current media environment is further weakened by ongoing low professionalism, a product of poor training and incentives of media house owners. First, owners of media houses often employ those with little to no journalism training because they are cheaper to employ than trained journalists with a Diploma certification or higher. Yet, even Diploma and Bachelor of Arts students lack the practical training necessary to conduct high-quality journalism after degree conferral. Lack of equipment and opportunity for practical training plagues degree-granting institutions. Second, the media tends to focus on covering urban elites and media house editors can often be pressured to devote limited time or page-space to them. However, journalists, the vast majority of whom are free-lance, are poorly paid and do not have the means to travel to rural areas to cover ordinary citizens. Third, a patriarchal lens pervades, resulting in stories that degrade or scandalize women's behavior. Women are often not interviewed or featured and issues of particular importance to women (*e.g.*, gender-based violence) tend to be cast aside as unimportant. Similarly, patriarchal values regarding age hierarchy can silence youth voices and issues.

However, at this juncture there are also critical opportunities to strengthen the media environment. The Media Services Act requires that media content be produced by journalists with a minimum Diploma degree by 2021, which will force media house owners to employ and pay higher quality journalists. Second, women comprise the majority of student journalists in the high-ranking journalism programs, having the potential to increase the number of female journalists. Third, several civil society organizations focusing on increasing reporting on women's and youth issues in the media have made large headway and gained backing from many media editors, the government, and religious stakeholders

in introducing women's and youth's voices and issues into the media, even sensitive issues such as sexual violence. Last, nationally-representative public opinion data show that Tanzanian citizens want to hear more about rural people, women's issues, and youth issues.

In response to these opportunities, USAID developed the Strengthening the Media and Information Environment Initiative to strengthen the quality of journalism, especially with regard to women and youth voices and issues. There are four components of the initiative: (1) strengthening the legislative and legal environment in which journalists may operate, (2) improving the professionalization of journalists, (3) fostering connection between the media and society (*e.g.*, ordinary citizens and civil society), and (4) increasing the capacity of community radios. The medium of focus is radio, given the sheer dominance of radio – the vast majority of Tanzanians (78%) receive news over the radio at least a few times per week (versus 33% TV, 24% newspaper, and 9% Internet).

While many programs exist under the scope of USAID's Strengthening the Media and Information Environment initiative, the intervention evaluated by this IE was conducted within the "Media and Civil Society Strengthening (TMCS) Program", known in Kiswahili as "Boresha habari". Under the TMCS program, an intensive training program was designed to train students in (a) practical investigative journalism for audio production and (b) diversity and inclusion of gender, age, and rural/urban groups to strengthen their ability to produce higher quality content as well as more diverse and attractive content regarding rural, youth, and women's issues.

2. RESEARCH QUESTIONS AND THEORY OF CHANGE

RESEARCH QUESTIONS AND OUTCOMES

The overarching research question and outcomes guiding this research are: What is the impact of audio investigative journalism and gender/youth/rural sensitivity training for young student journalists (Bachelor of Arts and Diploma track students)? We assess the following outcomes:

(1) Knowledge of Practical Journalistic Practices

(2) Ethics and Gender Diversity and Inclusiveness (the focus on rural and youth was dropped)

(3) Student Efficacy

(4) Topical Interests for Coverage

We also aimed at assessing short and/or mid-term career prospects (*e.g.*, attaining internships/jobs; producing and submitting content to media outlets) for students who participated in the training program. However, due to lack of information on the students after they have graduated from the universities and the challenges related to tracking students during the COVID-19 pandemic in general, we were unable to assess this outcome.

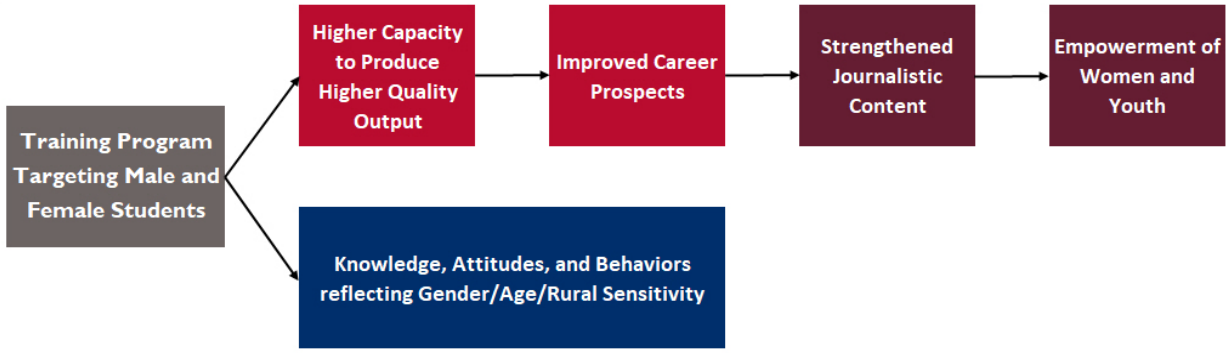
In addition, we had also aimed to assess the quality and appeal of radio segments produced by control versus intervention students in a contest (in collaboration with BBC). However, due to the COVID-19 pandemic, we had to halt research activities before the contest could be launched.

THEORY OF CHANGE

The theory of change for the professionalization of student journalists, around which this IE was designed, is in line with other types of vocational training programs (Figure 1). First, youth participation in high quality training should increase the capacity of participants to produce higher quality outputs. Second, production of higher quality outputs should increase the qualification of participants in the eyes of potential employers and thereby, improve career prospects. In the case of students continuing their education, they may also perform better on school metrics such as tests or practical assignments. Third, due to the gender/youth/rural sensitivity training component, the training may improve knowledge, attitudes, and behaviors regarding gender/youth/rural individuals on dimensions of diversity and inclusion.

Longer term outcomes that are beyond the scope of the IE timeline (represented in dark red boxes) are the strengthening of journalistic content as the students advance in their careers and produce higher quality journalistic outputs. In turn, such a media environment should aid in empowering women, youth and rural folks, given that media is well-known to be agenda-setting and persuasive.

Figure 1. Impact Evaluation Theory of Change



3. INTERVENTION DESCRIPTION

The intervention evaluated in this IE was implemented in several stages. The details of the intervention activity and the implementation stages were developed and finalized over several months of discussions between USAID DRG Learning Center, the USAID/Tanzania Mission, the IP, and the research team, including a scoping trip to Tanzania by the research team and a member of the DRG Learning Center. After the IE design was developed, the IP implemented a pilot to help understand the content and delivery of the training program. Then all students participating in the research study received technical assistance in audio recording and editing before the intensive training program was implemented. Finally, the IP implemented an intensive training program – the intervention – for randomly selected students in the participating universities. We discuss the details of the IE design in Section 4. Below, we discuss details of the intervention activities.

PILOT PROGRAM

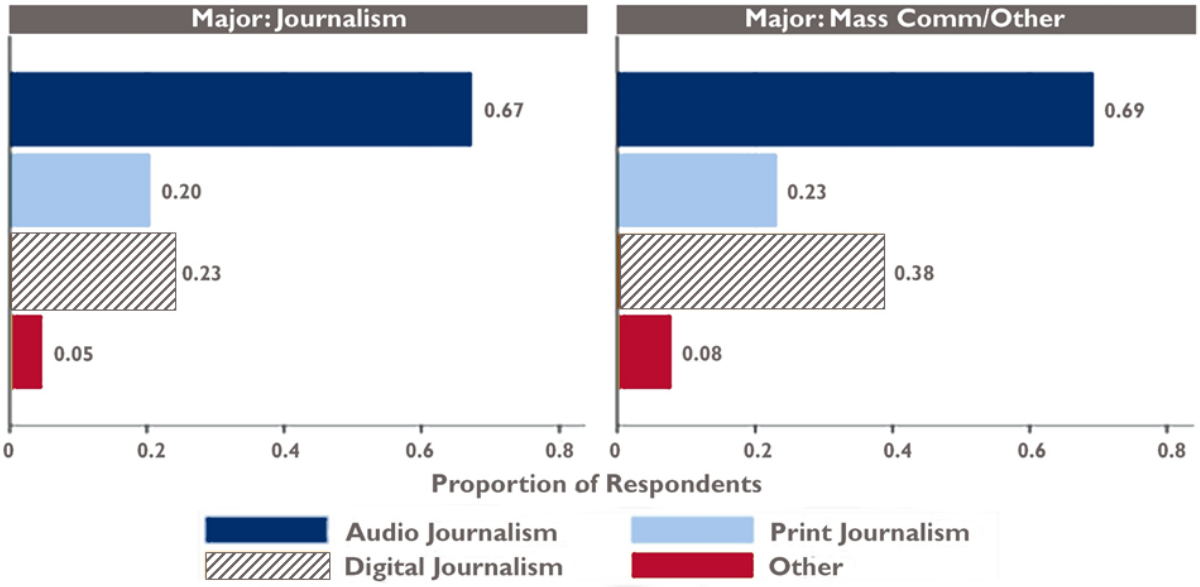
The pilot of the intensive training program was implemented in the summer of 2018 that took place in universities in Dar es Salaam, Mwanza, and Zanzibar; however, Zanzibar was not part of the IE as

implemented.[1] For the pilot, the IP produced a draft training manual and installed several audio recorders and computers with audio editing software. The pilot program included both technical assistance in learning how to use the software, theoretical and practical training on how to produce high quality audio productions, and training on explicit gender bias. Students included in the pilot program were those who had already graduated from their respective universities. The research team conducted an informative endline survey assessment of this pilot program (pilot participants only) to gain more insight into the appropriateness of the curriculum and the delivery methods.

BASELINE TECHNICAL ASSISTANCE FOR ALL STUDENTS

In Spring of 2019, the IP equipped participating universities with recording devices and editing software for audio production. Students were then trained in successive sessions such that all bachelors and diploma students who were in media studies programs, especially those majoring in journalism or mass communications, as well as public relations, received access and training to use this equipment to carry out audio recordings. At the training sessions for the software, students learned how to make a profile on a website that lists student journalists and allows them to list their resume details and to post their journalistic content.[2] The IP built this website in January-February 2019. Based on a screening survey conducted to select students for the program, most participants expressed interest in long-term careers in journalism (Figure 2). This suggests that the professional website training has the potential to be useful for many students' professional development.

Figure 2. Long-term Career Ambitions of Students by Major



[1] The IE did not include Zanzibar Journalism and Mass Media College because of the small student population expected to be enrolled in the Diploma and Bachelor of Arts programs related to journalism and mass communication.

[2] This website will be hosted on the website of a partner organization, like the press club union. This roster of journalists would be open to ANY journalist or student journalist with a certificate or higher. It will thus build capacity in the media environment as part of overarching activities.

Our screening survey, conducted before the baseline technical assistance (discussed in more detail in Section 4), showed that students generally had a device capable of recording audio (Table 1). However, in spite of students owning such devices, there were significant gaps in students' ability and experience recording and producing audio content, as well as familiarity with audio recording and editing software. Thus, we viewed the baseline technical assistance both as a valuable service provided to the journalism students as well as a requirement to compare control and intervention students given common foundational skills (especially necessary, if we had been able to implement the radio segment contest). The baseline technical assistance was also designed to help pique interest in the intensive training program.

Table 1. Smartphone and Audio Recording Capable Cell Phone Ownership, by University

CELL PHONE TYPE	UNIVERSITY	YES	NO
Smartphone	UDSM	23 (95.8%)	1 (4.2%)
	SAUT	25 (71.4%)	10 (28.6%)
	ZSJMCC	13 (61.9%)	8 (38.1%)
Audio Recording Capable Cell Phone	UDSM	21 (87.5%)	3 (12.5%)
	SAUT	23 (71.9%)	9 (28.2%)
	ZSJMCC	18 (90.0%)	2 (10.0%)

STUDENT JOURNALIST INTENSIVE TRAINING PROGRAM INTERVENTION

The intervention was an intensive training program that aimed to teach students to generate practical skills in producing radio content and reduce bias in reporting around gender, age, and rural identities, attitudes and behaviors that often persist in the Tanzanian media. The training program had multiple learning units in this area. The training also included learning units on different news platforms, the role of internet and social media, how to edit and package a news story, and interviewing skills.

For the actual training program, the materials were translated to Swahili (as were the research team evaluation materials)[3]. Also, a component was added on implicit bias and the explicit bias section was modified as well.[4]

The training programs took place between semesters in the summer of 2019 at the University of Dar es Salaam (UDSM) and Saint Augustine University of Tanzania (SAUTI). Due to the number of students and difficulty locating and training enough trainers, the IP decided to hold two sessions per university. The IP

[3] The need to have training materials in Swahili even though universities in Tanzania use English as the teaching language stemmed from the feedback we received from the participants of the pilot training. We discuss those results in the next section.

[4] However, a learning component on age and rural bias was not included in the final training materials.

also had the challenge of fitting the training program around the academic schedules of the universities. The dates for the two sessions were as follows:

- Session 1: July 22 - August 30, 2019
- Session 2: September 2 - October 11, 2019

AUDIO PRODUCTION ACTIVITY

Universities and students received the aforementioned Baseline Technical Assistance (equipment and training) and Student Journalist Intensive Training Program Intervention conditional on the university facilitating the research activities (*e.g.*, baseline survey, endline survey) and requiring that all students produce an original five to ten-minute audio segment investigating a topic of their choice.

The student audio productions were supposed to be aired on community radio and BBC as part of an initiative to increase youth content on the radio. The best quality audio productions were also supposed to be highlighted at an event with media house editors and other stakeholders (*e.g.*, TAMWA) with the possibility of receiving prizes. However, the evaluation of the student-produced audio production was cancelled due to the COVID-19 pandemic. If they had taken place, these events would have occurred in the summer of 2020 and would have been hosted by the IP and USAID.

PROFESSIONAL WEBSITE

Another component of the TSMC activity was the creation of a professional website hosted by the IP that would serve as an electronic database for trained journalists in the country. The platform was intended to catalogue journalists living or working in Tanzania who possess a minimum required education level of a Certificate in Journalism from a verified institute. The website was also intended to provide a straightforward way for potential employers and partners to contact journalists, as the journalist profiles would contain their contact information.

We aimed at assessing short and/or mid-term career prospects (*e.g.*, attaining internships/jobs; producing and submitting content to media outlets) for students who participated in the training program based on information on this website. For example, one year after the program, we could assess, using data from this website, the number and quality of any content posted and jobs/internships. At the time of this analysis, the website was up and running but did not have sufficient content for career tracking.

4. IMPACT EVALUATION DESIGN

RESEARCH DESIGN

We used a RCT to evaluate the intensive journalism training program conducted under the TMSC program. The RCT was developed during the DRG IE Clinic held in Washington, DC March 27-31, 2017 and on the scoping trip and follow-up activities in July and August of 2017. The population of interest was male and female diploma and bachelor students at accredited journalism programs in the two

academic institutions, University of Dar es Salaam SJMC and SAUT in Mwanza.[5] In drawing the sample for the IE from this population of interest, we decided that the first priority would be journalism and mass communication students, then public relations students as a secondary priority. We discuss details of the IE design and the sample selection process below.

RESEARCH DESIGN COMPONENTS

The research team implemented two screening surveys (one in June 2018, one in May 2019), a pilot program assessment survey (following the pilot program conducted in the summer of 2018), a baseline survey (August – October 2019), and an endline survey (November 2019 – January 2020). The random assignment of students was done to create an intervention group, who received the intensive journalistic training program, and a control group who did not receive the intensive training. This assignment was conducted using the results of the second screening survey.

SCREENING SURVEY FOR GUAGING STUDENT INTEREST, AVAILABILITY, AND BACKGROUND

The first screening survey was conducted in June 2018. The purpose of the survey was primarily to (1) collect information regarding student availability for the summer 2018 pilot program and (2) to identify general ownership of relevant equipment used during the training and for journalism activities. It also helped establish baseline expectations for student experience with digital media resources, interest in intensive training and, more generally, student interest in journalism topics and types. Results from this first screening survey showed that program interest in participation was high.

PILOT PROGRAM ASSESSMENT SURVEY

A survey was conducted after the pilot intensive journalist training program in the summer of 2018. The survey was self-administered and conducted in English to match the English language used in the IP training manuals. This survey had multiple sections: (1) Basic Knowledge, (2) Future Plans and Subjective Program Impact, (3) Efficacy, and (4) Improvement Suggestions for Course Content and Instruction.

In sum, although self-reported efficacy among students was very high following the training and instructors were lauded, students scored poorly on retention of knowledge and skills on both the training program's content for radio production, as well as on diversity and inclusion. We elaborate on these results here.[6]

We assessed efficacy in terms of students' belief on their ability to produce radio content and their perceptions of influence they might have through their content. Seventy-nine percent reported that they believed they would be completely able to independently produce a radio spot; 89% agreed or strongly agreed that they felt efficacy to do investigative journalism; 88% to understand political issues facing the country; and 99% to understand gender and youth issues facing the country. Virtually all (99%) believed they could do as good of a job as a journalist as their peers; 67% believed they have a say in what government does; and 44% believed that public officials care what journalists think.

[5] The universities signed memoranda of understanding with the IPs.

[6] Please see research design document for a full set of results in Appendix C.

Similarly, students rated the instructors highly – 85% of the students participating in the pilot rated instructor background in radio journalism and in diversity and inclusion as very or extremely knowledgeable. Students also rated instructors on several other categories on a 5-point scale from low to high with an average of 4.1 for enthusiasm, 3.5 for effectiveness in communicating ideas, 4.0 for receptiveness in answering student questions, 4.9 for encouragement of student participation.

However, students' belief on their efficacy and the highly-rated instructors did not lead to high scores on knowledge retention. We included 12 questions of basic knowledge recall on audio production, 10 vignettes (practical scenarios) requiring students to apply learning by identifying problems, and five questions on implicit bias.[7] On average, students answered 33% of questions correctly and 67% incorrectly regarding recall of basic knowledge from the manual, were able to correctly apply knowledge of bias by identifying problems in practical vignette scenarios at a rate of 19% correct and 81% incorrect, and recall at a rate of 3% correct and 97% incorrect knowledge of implicit bias (Table 2).

Table 2. Recall and Application of Knowledge Outputs

	AVERAGE PERCENT	
	CORRECT	INCORRECT
Basic Knowledge from Manual	33	67
Identifying Bias in Applied Vignettes	19	81
Knowledge of Implicit Bias from Circulated Materials	3	97

In open-ended questions for feedback, students remarked that the teacher should use Swahili only, which was evident in the English used by students to answer survey questions. Students thought that the ratio of student to equipment should be lowered, that stipends should be paid punctually, and the program should be lengthened. We presented the results and the feedback from the pilot in the design report and discussed incorporating changes based on these in the intervention training with USAID, the Mission, and the IP.

SECOND SCREENING SURVEY AND RANDOM ASSIGNMENT

A second screening survey was administered in May 2019 to provide a more updated understanding of student availability and willingness to engage in intensive training for radio journalism in summer 2019. This survey attempted to reach all bachelors and diploma students who were in media studies programs, especially those majoring in journalism or mass communications, as well as public relations. There were 993 respondents to this screening survey.

The data achieved two objectives: (1) assess receipt of the baseline technical assistance,[8] and (2) gather "blocking covariates" for random assignment for invitation into the summer intensive training. Students

[7] Implicit bias was not included in the training materials. However, we circulated materials on implicit bias to the IP in Spring 2018 that were incorporated into oral instructions.

[8] Although we planned to deliver the baseline technical assistance prior to the survey, the results indicated that not all students in the target population had received the baseline technical assistance. The IP delivered the baseline technical assistance to

were excluded from being eligible for the study if they were not interested and/or available for either of the two intensive training program sessions that would be offered as the intervention. Students were also excluded if they were not from one of the three majors. Of the 993 students, 941 were both interested and likely available for at least one of the two sessions.

Next, we randomly assigned students to the intervention versus control condition. The target sample size for the IE was 600 students – 300 for the intervention group and 300 for the control group – to ensure appropriate statistical power to detect any intervention effects. To do this, we first stratified the students by gender, year in the program, university, and academic major.[9] We then conducted the random assignment within each stratum. This stratified random assignment or "block" random assignment ensured that both groups had a similar composition based on the above mentioned characteristics. We present the balance in the number of students in terms of these characteristics in Table 3.

Because the students of most interest were those majoring in journalism and mass communications (rather than public relations), when blocking on major, we ensured all journalism and mass communication students were in the study either in the intervention or the control group. A majority of the students (60% in the intervention group and 59% in the control group) were journalism students and about 17% of the students were mass communication students (Table 3). The public relations students "filled in the rest" of the slots for the two groups to achieve optimal comparability across intervention (23%) and control (24%).

Additionally, the research team provided the IP with a waitlist for students in the intervention group in case any drop outs occurred. The waitlist was numbered and was again meant to assure comparability across intervention and control groups.

those who did not receive them, both to those randomly selected for the intensive program as well as the control group, before the intervention began.

[9] We did not use GPA as a stratification variable because this was not available for first year students, who were the plurality of students. Furthermore, secondary school exam scores (e.g., in math, English) did not correlate well to GPA among the more senior students, and the exams were on sufficiently different topics. Thus, we could not use exam scores in a meaningful way to proxy for ability. However, random assignment should be fairly good at producing an even draw on ability across the two groups even without blocking on ability.

Table 3. Sample Balance across Intervention, Control, and Waitlist on Major Characteristics at Random Assignment

COVARIATES		INTERVENTION GROUP	CONTROL GROUP	INTERVENTION WAITLIST	CONTROL WAITLIST
Total		300	302	164	167
Gender	Male	174	177	86	93
	Female	126	125	78	75
Major	Journalism	180	179	0	0
	Mass Communication	51	52	0	0
	Public Relations	69	71	164	168
Year	1	171	167	96	113
	2	73	71	32	32
	3	56	64	36	23

Finally, while many students were available for attending the training program at either session, some were only available to attend one of the sessions. For these students, we assigned them to the session for which they were available. For all other students, the session in which they participated was randomly assigned. Furthermore, students were randomly assigned to instructors within the session. These random assignment procedures ensure that certain types of students do not end up together or with certain instructors.

BASELINE AND ENDLINE SURVEY

Following the second screener survey, the team administered a baseline survey and an accompanying implicit association test (IAT) in August - October 2019. An endline survey with intervention and control groups was conducted in November 2019 - January 2020. The survey aimed to assess (1) knowledge of audio production and (2) diversity and inclusion. Both surveys were conducted using an online survey platform called Qualtrics. We provide details of the baseline and endline surveys in the next section.

5. DATA COLLECTION

BASELINE DATA COLLECTION

Baseline data collection was done using a survey followed by an IAT, both of which were to be administered in one sitting on a desktop computer. The survey and IAT instruments were first designed and translated, after which they were programmed in Qualtrics, a cloud-based online survey platform. Intervention students at both universities and in all sessions completed the survey and IAT in computer labs at their respective institutions. A total of 292 intervention students completed the survey and IAT across the two schools and two sessions. Due to logistical and timing issues, the data collection for the control group was conducted remotely at the end of the summer because there was no other

opportunity to have control students, who were not on campus during the summer, to complete the survey before returning to campus. Control group students needed to complete the survey before they returned to campus in order to avoid potential contamination in the form of information transmission from the summer training by intervention students to control group students when they would begin to intermingle at the start of the next semester of school. An incentive of 25,000 TZ shillings was provided to control students who completed the survey and the IAT in order to compensate for costs associated with taking the survey and IAT at internet cafes or other locations where they would be expected to pay since they did not have the option of using computer labs at the Universities, as the intervention students were afforded.

The research team faced considerable challenges in administering the survey to the control students remotely, which resulted in a low response rate. A majority of control group students in the research sample were not on campus, leading the research team to send the survey/IAT out via email. While the incentive provided to this population was intended to help offset some of the costs of time spent or travel to locations with reliable internet and desktop computers, engaging this population proved to be very challenging. The research team reached out to these students both by SMS and through phone calls in an effort to improve the response rate. However, the resulting response rate remained low and only 22 percent of control students successfully completed the survey and IAT. The research team ultimately adjusted the research plan to accommodate an endline-only design, using lessons learned during the baseline to inform endline data collection.

ENDLINE DATA COLLECTION:

Endline data collection was conducted among both intervention and control groups between November 2019 and January 2020. The instrument was similar in structure and content to the baseline instrument and included an online survey and IAT which needed to be completed in one sitting at a desktop computer. Students in both intervention and control groups were initially contacted by email which included a unique link to the survey and IAT. A local research assistant followed up with students through texts and phone calls to encourage participation. An incentive of 25,000 TZ shillings was provided to both intervention and control group students upon successful completion of both the survey and IAT. A total of 502 students participated: 257 from the control group and 245 from the intervention group, which resulted in response rates of 85.7% and 81.4% respectively.

As in baseline, the team had a difficult time convincing control students to take the endline survey, despite efforts to increase participation through mobilizing texts and emails by a local research assistant. Multiple contacts through both text and phone calls were made to each student who had not participated for several weeks in order to encourage participation. In checking for balance across these two groups, there is no difference in the proportion of men and women in intervention versus control. However, while the intervention and control groups have a similar proportion of mass communication students (17% and 19% respectively), the program group has a higher number of journalism students (57% versus 47% in the control) and a lower number of public relations students (26% versus 33% in the control). We discuss this imbalance further in Section 7 and the reasons why this ultimately was not an issue for the IE.

6. FINDINGS

We first describe results related to the successful delivery of the baseline technical assistance to all students. Next, we report the impact of the student journalism training, dividing into: (1) knowledge of practical journalistic practices, (2) ethics and gender inclusiveness, (3) efficacy, (4) topical interests, and (5) knowledge of university journalism resources. The question wording and protocols used for collecting data is presented in Appendix A, while detailed regression results are presented in Appendix B. In sum, we find that the program had little to no effect across these categories, which we elaborate below. In the next section, we explore possible reasons for the null to low effects and study limitations.

SUCCESS IN IMPLEMENTING BASELINE TECHNICAL ASSISTANCE

We asked students if they knew how to access and use university resources provided by USAID through the IP: recorders, computers, and editing software (Table 4). Since the goal of providing technical assistance was to reach control and intervention students equally, we should see high levels of knowledge and no differences across the control and intervention students. We see that, overall, knowledge of resources was very high for computers – at 98% and 99% of students in control and intervention groups. However, around a quarter of students in both groups did not have knowledge of how to access university recorders. Finally, while the students in the intervention group expressed very high levels of knowledge on using editing software, students without access to the activity (intervention) were significantly less likely to have such knowledge by eight percentage points.

KNOWLEDGE OF PRACTICAL JOURNALISTIC PRACTICES

Table 4. Knowledge of Accessing and Using University Resources

QUESTION	CONTROL (% AGREEING)	INTERVENTION (% AGREEING)
Recorders	76%	76%
Computers	98%	99%
Edit Software	91%	99%

Using materials provided by the IP on practical aspects of radio segment creation, we crafted a series of questions that would display knowledge of the main points communicated in the materials. Specifically, we asked four questions on the creation of content, and two questions on production. Table 5 below lists the percentage of students who correctly answered questions among the intervention and the control students (results of statistical tests in Appendix B). Of the content questions, intervention students generally had the same likelihood of getting answers correct as control students. In one case, the program had a statistically significant negative effect, although the negative effect is quite small in magnitude (Content Q3). There was similarly no change in likelihood of knowing the correct answer to production questions.

Table 5. Content and Production Knowledge

QUESTION	CONTROL (% CORRECT)	INTERVENTION (% CORRECT)
Content Q1: Writing Style	75%	78%
Content Q2: Central Principle of Writing for Audio	58%	68%
Content Q3: Number of Interviews	6%	4%
Content Q4: Definition of a "Cue"	8%	5%
Production Q1: Four Steps of Editing	29%	36%
Production Q2: Production Definitions	15%	20%

Note: Refer to Appendix A for full survey question wording.

ETHICS AND GENDER INCLUSIVENESS

Using materials provided by the IP, we crafted a series of five questions that would display knowledge of the main points communicated in the materials related to ethical aspects of journalism, including a learning module on gender balancing and issues of discrimination based on gender. Students in the intervention group were no more likely to correctly answer four of the questions, and they were statistically significantly less likely to correctly answer one question (Question 1); see Table 6 below.

Table 6. Ethics and Gender Inclusion

QUESTION	CONTROL (% CORRECT)	INTERVENTION (% CORRECT)
Ethics Q1: Unconscious Bias	9%	6%
Ethics Q2: Affinity Bias	22%	29%
Ethics Q3: Confirmation Bias	27%	30%
Ethics Q4: Gender Equality Laws	34%	35%
Ethics Q5: Interviewing Youth	14%	13%
IAT D Score	0.2	0.2

Note: Refer to Appendix A for full survey question wording.

We also had students engage in an implicit association test (IAT). Currently, many scholars are researching whether trainings on discrimination towards marginalized groups can reduce negative implicit associations towards such groups. Implicit associations are automatic, unconscious biases that may emerge due to social norms and the media that lead people to associate certain people with certain traits. Implicit associations are thus beliefs that people may be unwilling to report because they are socially undesirable. However, implicit associations may also be something people are unable to report. For example, someone may believe that women and men should be equally associated with the public sphere, but may nonetheless automatically and unconsciously associate men with the public sphere to a

greater degree due to men's historical and traditional role in the public sphere, or more frequent media portrayals of male leaders or men participating in the public sphere.

The IAT measures the strength of associations between a group of people (here, men and women) and stereotypes (here, public and private sphere). The IAT asks people to quickly sort words related to the categories of male and female (*e.g.*, girl, male, boy, female) as well as public and private sphere (*e.g.*, household, *baraza* (local discussion group meeting)) into categories on the left and right hand side of the computer or tablet screen. See Appendix A on the words used that were crafted to be locally appropriate. The IAT score is based on how long it takes a person, on average, to sort words together on the same side of the screen versus on opposite sides of the screen related to the groups and the stereotypes. Someone who can more easily sort words related to men and public sphere together than women and the public sphere together (and likewise, women and the private sphere versus men and the private sphere) would have an implicit association of men in the public sphere, and women in the private sphere.

Many companies, government agencies (*e.g.*, police), and universities are using implicit bias trainings in an effort to reduce biases, both explicit and implicit. However it is currently under investigation what types of trainings, specifically, might be effective. Thus, testing this program for effectiveness was an open social science and policy question.

The data show that students have implicit biases that dovetail with traditional stereotypes – they more readily associate men with the public sphere, and women with the private sphere. The intensive training program did not have a significant effect in reducing such a bias. These results are useful to understanding what trainings may not be effective at changing implicit biases.

EFFICACY

Students were asked a battery of questions regarding how confident they were in their abilities to undertake journalism. Students were asked about their strength in: (1) producing radio journalism, (2) gender sensitive reporting, (3) finding a story, (4) covering a story, and (5) producing a story. Students were also asked if they believed they were (6) qualified to perform investigative journalism, (7) could perform as a journalist better than most students, (8) could mobilize their community through their reporting, and (9) could identify fake news. Overall, students displayed a large degree of efficacy. While program beneficiaries often show higher efficacy, the difference between the intervention and control students is not statistically significant except for two answers (Efficacy Question 5 and 9). See Table 7 below.

Table 7. Efficacy

QUESTION	CONTROL (% REPORTING)	INTERVENTION (% REPORTING)
Efficacy Q1: Strength in Producing Radio Journalism	Poor: 0% Average: 30% Strong: 70%	Poor: 0% Average: 22% Strong: 78%
Efficacy Q2: Strength in Gender Sensitive Reporting	Poor: 1% Average: 36% Strong: 63%	Poor: 0% Average: 32% Strong: 68%
Efficacy Q3: Strength in Finding a Story	Poor: 0% Average: 25% Strong: 75%	Poor: 0% Average: 24% Strong: 79%
Efficacy Q4: Strength in Covering a Story	Poor: 0% Average: 29% Strong: 71%	Poor: 0% Average: 24% Strong: 76%
Efficacy Q5: Strength in Producing A Story	Poor: 1% Average: 36% Strong: 63%	Poor: 1% Average: 22% Strong: 77%
Efficacy Q6: Qualified Perform Investigative Journalism	Strongly Agree: 44% Agree: 45% Disagree: 9% Strongly Disagree: 2%	Strongly Agree: 38% Agree: 49% Disagree: 12% Strongly Disagree: 1%
Efficacy Q7: Perform as Journalist Better Than Other Students	Strongly Agree: 73% Agree: 26% Disagree: 0% Strongly Disagree: 0%	Strongly Agree: 72% Agree: 26% Disagree: 2% Strongly Disagree: 0%
Efficacy Q8: Mobilize My Community Through Reporting	Strongly Agree: 71% Agree: 28% Disagree: 0% Strongly Disagree: 0%	Strongly Agree: 76% Agree: 23% Disagree: 0% Strongly Disagree: 0%
Efficacy Q9: Identify Fake News	Strongly Agree: 63% Agree: 33% Disagree: 3% Strongly Disagree: 1 %	Strongly Agree: 73% Agree: 26% Disagree: 1% Strongly Disagree: 0%

Note: Refer to Appendix A for full survey question wording.

TOPICAL INTERESTS FOR REPORTING

One aim of the student training was to increase interest in reporting on topics currently under represented in the media such as women's, youth, and rural issues. Students were asked to name the topics that they were interested in reporting on the most. Students in the intervention group displayed significantly more interest in reporting on gender and rural issues, while students in the control group were significantly more interested in entertainment and sports.

Table 8. Topical Interests for Reporting

TOPIC	CONTROL (% REPORTING INTEREST)	INTERVENTION (% REPORTING INTEREST)
Rural	46%	61%
Youth	69%	75%
Women	53%	67%
Sports	25%	20%
Politics	20%	16%
Economy	13%	8%
Entertainment	28%	18%

WERE PROGRAM EFFECTS DIFFERENT BY GENDER OR UNIVERSITY CONCENTRATION?

It may be that the program was differentially effective for males versus females, or for journalism versus mass communications versus public relations students. Perhaps null results were limited to one gender or particular majors, and the program may have been effective for other groups. For example, the IP expressed a concern that intervention effects would be smaller for public relations majors versus journalism or mass communications majors, even though all students had a basic foundation in media studies during the first two years of studies and all students were interested in the training that they were enrolled in. See Appendix B for regression results.

With regards to gender, we did not generally see statistically significant differences in the results.[10] Similarly, we did not see many statistically significant differences across majors.[11] While statistical power dwindles to assess statistical significance of small and medium effect sizes across these subgroups, we did not see any suggestive leanings that results would be different even with greater statistical power.

[10] An exception is a positive treatment effect on Question 2.2 on production for females only.

[11] One exception is that the program had a positive effect for Question 1.1 only among mass communications and public relations majors, but not journalism students. Similarly, QK3 only was more likely to be answered correctly by public relations students taking the program, versus journalism students (and the opposite for QK5). It also seems that, while the program buoyed interest in women's issues and decreased interest in entertainment across all majors evenly, for public relations students, the program increased interest in rural areas (while decreasing it in sports and politics).

7. DISCUSSIONS: REASONS FOR NULL EFFECTS AND VALIDITY CHALLENGES

The evaluation suggests mainly null effects of the program. We consider multiple reasons, and also revisit some of the validity challenges proposed in the design document, namely, non-compliance with and attrition from the programs for intervention group students, and participation in alternative training programs by control group students.

INCONSISTENT INTERVENTION DELIVERY

ISSUES RELATED TO CURRICULUM DEVELOPMENT AND DELIVERY

One reason for null results may relate to issues regarding curriculum development and delivery. There were two primary concerns with the written training materials and its delivery:

- First, there were different expectations regarding the training material development and delivery between the research team and the IP, but this difference didn't emerge in the design/early implementation phase, but only once we were well into implementation. Training materials were not fully developed and finalized prior to piloting. The training of trainers occurred with preliminary materials with the intention of having trainers further develop the materials themselves to encourage buy-in to the materials they would use to teach. This resulted in final training materials that did not include some aspects that the research team hypothesized to be necessary for the program to be effective; the IE was designed to empirically test that hypothesis.

- Second, the lack of a standard curriculum resulted in trainers delivering somewhat different versions of what was intended to be a standardized radio production training. While such trainings may be effective in some contexts, it is highly problematic for an IE, which relies on evaluating a common intervention. In this case, each training was different. Accurate testing for program effects is complicated when different versions of the training are delivered to different students and there is no detailed documentation of the differences between sessions, as a result, it is difficult to define what is being evaluated.

STUDENT FEEDBACK WAS POSITIVE

In addition to assessing students' knowledge, we also asked students to provide their own assessments. Those assessments were positive overall. However, it should be cautioned that students may feel compelled to provide more positive assessments if they believe doing so will make it more likely that a partnership with USAID/the IP would continue, either for themselves or for fellow students.

We asked students who participated in the intensive training about the quality of the program in a few different areas. When asked about the pace of the class as fast or slow, 83% rated the class as about right, with 12% saying it was a little fast and 5% saying it was much too fast. When asked about the instructor's knowledge, responses were moderate. When asked about their instructor's knowledge of media, 23% said the instructor was very knowledgeable, while 72% rated them in the middle, and 4% as low. Instructors were also rated in the middle regarding their knowledge of inclusion and diversity: 17% reported high knowledge, 73% in the middle, and 9% low.

However, instructors received quite a high rating on other teaching dimensions. Regarding their enthusiasm with the material – 73% of students rate their instructors as very good, and 23% as good. Regarding their effectiveness in communicating ideas, 81% rated instructors as very good and 17% as good. On their receptiveness to student questions, 77% rated instructors as very good with 18% giving the rating of good; 86% rated instructors as very good in encouraging students to speak in class, with 10% rating them as good. Equal treatment by the instructor for female and male students was also rated at 83% very good and 13% good.

SPILLOVER

Spillover occurs when students in the control group receive the intervention in a secondhand fashion from intervention group students. Given that no control students were able to interlope on the intervention activity (they were home during the semester break), first hand receipt of the intervention is of little concern. However, students who received the program may have passed on knowledge to students that were not randomly selected to receive the program after the university was back in session.

On the survey we asked students who did NOT have the program whether they talked to students in the training program about the training content. Spillover could be a concern, since 31% of them talked "many times" and 28% "sometimes" while only 21% reported talking only "a few times" and 20% reported "never." Of course, we don't know what they talked about or the extent of discussion.

Taken together, we have little worry about spillover because many of the responses for both intervention and control reveal low levels of knowledge rather than high levels of knowledge. When correct answers across the intervention and control groups are both equally low, then perhaps the training was not effective. However, where correct answers across the two groups are both equally high, spillover may be an issue.

NON-COMPLIANCE, ATTRITION, AND PARTICIPATION IN ALTERNATIVE PROGRAMS

We also assess a number of issues that may cause imbalances across intervention and control groups, in terms of student background characteristics, that confound the intervention assignment, and explain null results. These issues are related to non-compliance, student attrition from the program, and participation in alternative programs by control students.

To address non-compliance due to financial issues (for example, the screening survey identified that a number of students were unable to afford housing between semesters to participate) the evaluation team and the IP ensured that students were given payment for participation to cover such needs. However, things can always come up between the time that students project that they could participate and the time that the program takes place. In order to ward off potential imbalances, we created a waitlist for the program and control groups that would ensure balance. Only 13 students in the intervention dropped out prior to the training and were replaced with waitlist students (three in SJMC and ten in SAUT).

However, one issue that arose is that some students enrolled in the intensive training program had to retake final exams and missed initial program days of the first session. The IP was not aware that this might be potentially a time conflict when they scheduled the training days. Detailed documentation on

student absences and on which students were paid sitting allowances for which training days was not available from the IP, so we could not assess to what extent it affected the impact results. If this problem of missing initial training days were severe, it might explain null results. However, in many cases, the differences between control and intervention are not close to significant, and intervention group levels (as well as control group) of correct responses are very low. Thus, we are not very concerned that this issue is critical.

A second concern may be that there was survey attrition in the endline that produced an imbalance (*e.g.*, the best students in the intervention group did not happen to take the survey while the best students in the control group did), and that this imbalance is responsible for lack of results. There were six individuals who took the survey (five in control, one in the intervention) who were not in the original population assessed in the screening survey that was used to generate intervention and control groups (or at least, could not be matched to individuals in that population). In the end, 82% of the original group assigned to the intervention took the endline survey (either because they did not end up taking the program or they took the program and did not answer the endline survey). Note that, due to 13 students assigned to the intervention dropping out of the program, they were replaced with 13 intervention wait list individuals, of whom 12 took the endline survey). Of the original control group, 71% took the endline survey, and the rest of the survey takers were recruited from the control wait list. The reason for this recruiting was to ensure balance across intervention and control.

We checked the balance between those who completed the surveys in the intervention group and those who completed the survey in the control group to ensure that the two groups were still comparable. We found balance was achieved on gender and there was a slight imbalance where there were more journalism and less public relations students proportionally in the intervention group versus the control. However, we are not concerned about the latter imbalance driving results because we examined heterogeneous intervention effects by major concentration, and we found null results in both average intervention effects as well as heterogeneous intervention effects. Because we do not have GPA for most of the students, we cannot assess imbalance in the endline survey on ability. In sum, we are not particularly concerned with the issue of attrition affecting study conclusions.

A third and related concern for the study is whether those not randomly selected for the intensive training had access to alternative trainings or experiences that boosted skills. Having access to alternative, similar training may, however, only explain null intervention effects for those few areas where there were high levels of knowledge or efficacy across both groups.

Indeed, it appears control group students did have some exposure to alternative trainings or may have engaged in some journalism activities on their own. Many students in the control group reported producing an audio segment with others in a group – 51%, while 52% reported producing one on their own. Around a third (34%) said they received training on producing an audio segment and around a fifth (21%) received training on gender/youth inclusion. Seventeen percent reported having an internship (whereby 58% of those with an internship had one related to media) and 24% had a job (whereby 60% of those with a job had one related to media). Of course, many helped their family with agriculture, household, or business tasks – 53% – and 25% undertook leisure. Thus, it seems that some students may have undertaken practical production of audio segments on their own, outside the context of an internship or a job.

SURVEY RESPONSE BIAS

Respondents could falsely report on a survey with an alternative goal. This is not a concern with knowledge assessment or the IAT, but could be a concern for the questions on efficacy or assessment of the program. For example, students could report being overly confident regarding their own abilities in both intervention and control groups, and/or treated students could report being overly satisfied with the program if they believe that the answers may affect future eligibility for a program access or USAID partnership with their university program. Of course, student efficacy could just be high from university training and the intensive program does little to boost such high efficacy.

STUDY LIMITATIONS

This evaluation has a few limitations that we have briefly touched on elsewhere in the report, but we summarize them here.

- First, one limitation of this study is that initially the design called for an assessment of participation in a five minute radio segment contest. The research team had been in discussions with the BBC (from the time of the scoping trip, and again after the endline), who expressed willingness to play the most successful segments produced, along with studio tours or other professional exposure for those students producing the successful segments. Further, the research team had planned to incentivize production by offering prizes (*e.g.*, a tablet). However, these discussions were still ongoing in February 2020 and given the COVID-19 pandemic, we needed to abandon planning for this part of the evaluation. Carrying out such a contest would have put students in direct contact with others and increased public risk of disease. By examining who would produce a segment, as well as the quality of the segment, the evaluation could have assessed practical implementation of skills. Perhaps, even if knowledge did not stick for a "test format" akin to the online survey, for example, students in the program may have been more likely to participate in producing a segment, or produced a higher quality segment.[12] Such a behavioral output is arguably a very good test of the program effect, and we regret not being able to implement it.

- Second, while we have statistical power to detect moderate to large program effects, statistical power is limited in detecting small program effects (as noted in the design document) due to a limited number of treated students. However, we note that predicted probabilities and values are very similar across intervention and control groups and confidence intervals are not particularly similar. This means, if we had more statistical power (*i.e.*, more students enrolled in the program and a commensurate increase in control students), it is unlikely that differences would emerge and reach statistical significance. We note that we present results without clustering standard errors at the classroom level, since this would further limit statistical power and be even less likely to reveal program effects.

- Third and relatedly, the original design called for a difference-in-difference evaluation to enhance statistical power. However, due to logistical and timing issues, the data collection for the control group was conducted remotely at the end of the summer because there was no other opportunity to

[12] One issue we noted, however, is universities seemed reluctant to require students to create a segment, so one limitation of the analysis may have been that it is hard to compare content across control and treatment if only certain people, or different types of people, select into production of a segment in each group.

have control students, who were not on campus during the summer, to complete the survey before returning to campus. The research team faced considerable challenges in administering the survey to the control students remotely and 70% of the control group did not complete the baseline survey which was insufficient to conduct a difference-in-difference analysis. The reasons students gave for not taking the baseline survey were as follows: 52% said they did not receive an email requesting participation, 26% said they did not get an SMS message asking them to participate, 36% said they had no access to a computer, and 14% had no access to the internet. Only 2% said they meant to but forgot. None said that the reason was inadequate payment. We do note that failure to get prompt payment, due to technical difficulties of transferring money internationally at high speed, angered some students in previous data collection efforts.

- Fourth, one issue that was of special concern to the IP was that students in the target population were inappropriate. Some of the students in the media studies concentration eventually specialize in journalism or mass communications, while others end up specializing in public relations. While those in the later years who specialized in journalism and mass communications were prioritized for inclusion in the study, public relations concentrated students were also included to meet the minimum number of study participants required for the RCT (both for intervention and control, since groups must be balanced).

  The IP preferred to train small-groups of highly-motivated students working in university radio stations or on university newspapers, and mentor them over a couple of years to have them produce better radio contents with the equipment made available to them; this was one of the typical populations to whom the IP had delivered its capacity-building (*i.e.*, highly focused on journalists in the traditional sense). While such models were used in previous projects, it is extremely difficult to address the selection bias in evaluating such programs. Also, given USAID's interest in evaluating an intensive training program for general students who may eventually choose a career in journalism and the need for the IE to include a large number of students to ensure statistical power, the IE included students in journalism, mass communication, and public relations. Although journalism students were prioritized, the null impacts could be related to the inappropriate student population as pointed out by the IP.

  The research team felt the inclusion of these students would not significantly impact the evaluation for a variety of reasons. First, all students who are in the study (treatment and control) expressed interest in program enrolment. Second, students had common foundational coursework from earlier years and were all enrolled in media studies. Third, due to job incentives, some students who had been planning to follow the public relations path may still change to become journalists as they continue through school. This means the students' declared major concentration might not reflect actual career interests and the intensive program may enable some students to obtain internships or jobs in journalism who may have formerly believed that that was not possible.

8. RECOMMENDATIONS

The impact evaluation was unable to detect a measurable impact from the program. We have identified a variety of potential causes for these null effects and recommend the following best practices based on the lessons learnt when designing future research into similar programs.

EVALUATION DESIGN RECOMMENDATIONS

- Include specific requirements of the RCT in the agreement with the IP to ensure the IP's program will accommodate the IE research design requirements.
  - This should include the early establishment of relationships with partner organizations, (such as Universities in this instance), with whom both the researchers and the IP need cooperation from the onset of design. In retrospect, the research team would have benefitted from more direct communication with the Universities (rather than having all communication about the IE pass through the IP); this might have ensured they were more well-informed about aspects of the intervention that were of greater importance for them and quickly or more completely uncovered some of the complications that were discovered during the IE implementation. Having partner organizations whose role is critical to the success of the intervention design and implementation fully informed is crucial to the success of the IE.
  - Given the increased time demands on the IP when implementing an activity being evaluated through an RCT, expectations regarding staff time commitment, consistency of implementation, requirements for access to beneficiaries to conduct surveys and/or testing, time allotted throughout program implementation to account for required research tasks and similar considerations should be clearly defined and agreed upon by the funding agency, the research team, and IP at the start of the project. Although the research team believed it had fully conveyed to the IP what was involved in conducting the IE, there were many instances where the IP did not fully appreciate the effort that was required to fulfill the research design until the task was under way.
- For IEs such as this one that are undertaken from a learning perspective (as opposed to an accountability perspective) to test the effectiveness of a concept, the intervention should be jointly developed by the research team, IP, and USAID along with topic and local country experts who can tailor training materials to the specific context and the concept being evaluated for the learning purpose.
- Despite advances in technology and the expansion of internet in recent years in Tanzania, there remain significant challenges with access to technology which impacted the ability of control group students to effectively participate in the survey once they had left campus for the summer and returned to their hometowns, which were often rural and did not afford easy, reliable access to the internet or computers. The IAT required such a connection and could only be completed on a computer (rather than a smartphone) which complicated participation for several students. The original IE design anticipated all data collection would occur on campus, where students would have easy access to adequate computing resources. IE designs need to include "defensive" measures to address such unanticipated issues, such as alternative modes of data collection or, in the case of a mode-specific data collection like the IAT, ensuring that key IE outcome measures do not have such dependencies.

IMPLEMENTATION RECOMMENDATIONS

- All training materials should be translated into the local language for all phases of implementation. For this program, the pilot relied upon draft versions of English language materials rather than finalized

versions translated into Swahili. This complicated the research team's ability to learn from the pilot; it was difficult to determine if observed deficiencies in pilot outcomes were due to the materials being used or if pilot participants simply did not understand the materials being used due to language barriers. The training materials were later translated into Swahili and revised prior to use during implementation of the main summer program, but the opportunity to use the pilot to improve the quality and effectiveness of the training materials and update them accordingly was limited.

- To fully understand what is being evaluated, it is important for all materials used to implement the training be well documented and administered consistently to all participants (*i.e.*, ensure as much as possible that each beneficiary receives the identical intervention). This means that similar programs being evaluated through RCTs in the future should aim to limit the amount of variability in content and topics covered across multiple training sessions. Content, including examples of key concepts, within some training modules was developed by the students and teachers through conversations and brainstorming sessions. This complicates analysis because differences in learning outcomes may be a result of the variability in the content of different training sessions.

- To replicate successful programs, well-documented curriculum, implementation details, including deviation from plans and non-adherence to the plans, is absolutely necessary. Additionally, if a program yields null results, such documentation helps in understanding what may have been responsible for some of the null results.

APPENDIX A: SURVEY INSTRUMENT

ENDLINE - DRG TANZANIA IE

Start of Block: CONSENT BLOCK

This is a short survey geared towards students in tertiary degrees for journalism, mass communication, and public relations. The survey covers aspects of media production, as well as the media more generally in Tanzania. This study will use the Implicit Association Test (IAT) as well, a specific type of survey that will be described later. The survey should not take more than 45 minutes. It is important to answer questions as honestly as possible, with as little outside distraction as possible. The results of the study will inform future student programming. Upon completion of the survey, you will receive 25,000 shillings. This money will be sent through your mobile phone provider (Mpesa, Tigopesa, AirtelMoney, etc.)

Your responses are confidential. Only the researchers from NORC will have access to the data. The information you and others provide will be summarized in a report. Your name or any other identifying information will never be used when we report results of the survey. Your participation in this survey is completely voluntary – it is your choice to take this survey or not. If you feel uneasy with any of the questions, you may skip those questions without answering them. You may also stop the survey at any time. If you decide not to take part or to stop the interview, you will not lose any services that you are otherwise receiving.

By clicking the 'Proceed' button at the bottom right of the screen, you acknowledge your acceptance to participate in this survey. Thank you very much for your participation.

End of Block: CONSENT BLOCK

Start of Block: MODULE 0: FIELD CONTROL

first_name **Please type your first name**

location **Select your location:**

- Mwanza (1)
- Dar es Salaam (2)

student_ID_1 **Please enter your student ID:**

student_ID_2 **Please re-enter your student ID:**

mobile_1 **After completing this survey, you will be sent a payment through your mobile phone provider. Please enter your phone number so we can send you this payment:**

mobile_2 **Please re-enter your phone number so we are able to send you this payment:**

End of Block: MODULE 0: FIELD CONTROL

Q1_1 In the "inverted pyramid style" of writing, the most important information is found…

- ○ At the top (1)
- ○ In the middle (2)
- ○ At the bottom (3)

Q1_2 The central principle of writing for radio is…

- ○ Following editorial instructions
- ○ Your passion makes good stories
- ○ The listener comes first
- ○ Avoiding "dead air" at all costs

Q1_3 Generally speaking, you should interview about how many people for 5-6 good *vox pops?*

- ○ One is enough (1)
- ○ 2-4 (2)
- ○ 5-7 (3)
- ○ 8-10 (4)
- ○ 11-15 (5)
- ○ 15-20 (6)

Q1_4 A "cue" should… (select all that apply)

- ○ Summarize what is to follow
- ○ Give a listener a sense of anticipation
- ○ Be less than 30 seconds long
- ○ Repeat opening words of the report

Q_2_1 T The four steps of editing are: (a) Mix, (b) Edit and start your cue sheet (c) Listen to voice elements, and (d) Listen to non-voice other elements.

Please order these steps using numbers 1 through 4 to indicate which is the first step; the second step; the third step, and the fourth step.

- _____ Mix (1)
- _____ Edit and create a cue sheet (2)
- _____ Listen to vocal components (3)
- _____ Listen to non-vocal components (4)

Q_2_2 Please select the word that matches the definitions that follow.

Q_2_2_0_GROUP (a) A short song or piece of music, which acts an audio logo or brand.

- ○ Actuality (1)
- ○ Wild Track (2)
- ○ Sounder (3)
- ○ Jingle-jingle (4)

Q_2_2_1_GROUP (b) Natural sound of the location.

- ○ Actuality (1)
- ○ Wild Track (2)
- ○ Sounder (3)
- ○ Jingle-jingle (4)

Q_2_2_2_GROUP (c) The recording of something happening.

- ○ Actuality (1)
- ○ Wild Track (2)
- ○ Sounder (3)
- ○ Jingle-jingle (4)

Q_2_2_3_GROUP (d) A recorded tune used to introduce segments of the broadcast.

- ○ Actuality (1)
- ○ Wild Track (2)
- ○ Sounder (3)
- ○ Jingle-jingle (4)

intro_experiments **In the following section, we are going to present to you stories that you might find in the media in Tanzania. We would like for you to read each story carefully. After each, you will be asked your opinion about the contents of the story. You will also be asked to recall some basic facts from the article.**

Q116 Please read the following hypothetical news story on fake news law. You will be asked your opinion about the contents of the story. You will also be asked to recall some basic facts from the article.

Randomized to QE_fnccmpres, QE_fnccmparty, QE_fnmixpres,QE_fnmixparty_text

QE_fnccmpres

Headline: New Commission—appointed by President Magufuli—Recommends increased penalties for spreading "fake news" about the government

A new government commission has been created in Tanzania to reduce the spread of misinformation/ "fake news." The Commission has proposed amending the Media Services Act to include stricter penalties for those accused of disseminating misinformation/ "fake news." It will allow the commission to arrest and imprison journalists and editors accused of violating the law.

Supporters of the proposal claim that severe penalties are needed to combat misinformation/"fake news" about the country's economy and politics. Those who oppose the proposal claim that the commission may use its power to target critics of the current government and to restrict of freedom of expression. The members of the commission - who are CCM members - were all appointed by the President and their pictures are found above. **After careful scrutiny, the commission (pictured above) recommended to increase penalties for spreading misinformation/ "fake news" about the government.**

QE_fnccmparty

Headline: New Commission—appointed by the ruling party—Recommends increased penalties for spreading "fake news" about the government

A new government commission has been created in Tanzania to reduce the spread of misinformation/ "fake news." The Commission has proposed amending the Media Services Act to include stricter penalties for those accused of disseminating misinformation/ "fake news." It will allow the commission to arrest and imprison journalists and editors accused of violating the law.

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QE_fnmixpres

Headline: New Commission—appointed by President Magufuli—Recommends increased penalties for spreading "fake news" about the government

A new government commission has been created in Tanzania to reduce the spread of misinformation/ "fake news." The Commission has proposed amending the Media Services Act to include stricter penalties for those accused of disseminating misinformation/ "fake news." It will allow the commission to arrest and imprison journalists and editors accused of violating the law.

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QE_fnmixparty

Headline: New Commission—appointed by political parties—Recommends increased penalties for spreading "fake news" about the government

A new government commission has been created in Tanzania to reduce the spread of misinformation/ "fake news." The Commission has proposed amending the Media Services Act to include stricter penalties for those accused of disseminating misinformation/ "fake news." It will allow the commission to arrest and imprison journalists and editors accused of violating the law.

Supporters of the proposal claim that severe penalties are needed to combat misinformation/ "fake news" about the country's economy and politics. Those who oppose the proposal claim that the commission may use its power to target critics of the current government and to restrict of freedom of expression. The members of the commission - who are members of various political parties - were appointed by their political parties and their pictures are found above. **After careful scrutiny, the commission (pictured above) recommended to increase penalties for spreading misinformation/ "fake news" about the government.**

QH_1 In the article about "Fake News," among the eight committee members, how many CCM members were on the committee that considered the policy about "fake news?"

QH_2 In an article on "Fake News", what decision did the committee make regarding punishment for disseminating "Fake news?"

- ○ Increasing penalties for disseminating "Fake News" (1)
- ○ Decreasing Penalties for disseminating "Fake News" (2)

QH_3 In the article on "Fake News," who were the committee members selected by?

- ○ President Magufuli (1)
- ○ Their political parties (2)

Q_E_1 Do you agree or disagree with the following statement: Personally, I think the committee made the right decision.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Agree (3)
- ○ Strongly Agree (4)
- ○ Refused (5)

Q_E_2 Do you agree or disagree with the following statement: This decision is for the better of the media environment in Tanzania.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Agree (3)
- ○ Strongly Agree (4)
- ○ Refused (5)

Q_E_3 Do you think decision-making process was fair?

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Agree (3)
- ○ Strongly Agree (4)
- ○ Refused (5)

Q_E_6 Do you think the committee can be trusted to make decisions that improve the efficiency of government in Tanzania?

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Agree (3)
- ○ Strongly Agree (4)
- ○ Refused (5)

Q_E_7 Thinking about the way the committee was chosen, do you agree or disagree that the committee can make decisions without influence from political actors?

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Agree (3)
- ○ Strongly Agree (4)
- ○ Refused (5)

Q_E_8 Thinking about the partisanship of committee members, do you agree or disagree that the committee can make decisions without influence from political actors?

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Agree (3)
- ○ Strongly Agree (4)
- ○ Refused (5)

Q_E_9 Thinking about the way the committee was chosen, do you agree or disagree that the committee can make decisions that represent Tanzanians in general?

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Agree (3)
- ○ Strongly Agree (4)
- ○ Refused (5)

Q_E_10 Thinking about the partisanship of committee members, do you agree or disagree that the committee can make decisions that represent Tanzanians in general?

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Agree (3)
- ○ Strongly Agree (4)
- ○ Refused (5)

Q_E_11 Thinking about the way the committee was chosen, do you agree or disagree that the committee can make decisions that improve the quality of democracy in Tanzania?

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Agree (3)
- ○ Strongly Agree (4)
- ○ Refused (5)

Q_E_12 Thinking about the partisanship of committee members, do you agree or disagree that the committee can make decisions that improve the quality of democracy in Tanzania?

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Agree (3)
- ○ Strongly Agree (4)
- ○ Refused (5)

Q117

Please read the following hypothetical news story about a sexual harassment law. You will be asked your opinion about the contents of the story. You will also be asked to recall some basic facts from the article.

Option 1: Mixed panel – increase (harassment_expand_mixedgender.jpg)

The Arusha City Council formed a special committee to consider legislation that would increase penalties for sexual harassment in the workplace. The law would require businesses to discipline employees found guilty of sexual harassment. Penalties could include immediate suspension or termination.

The law would use a standard definition of sexual harassment, which includes unwelcome sexual advances, requests for sexual favors, and other verbal or physical harassment of a sexual nature. In Tanzania, most sexual harassment complaints are filed by women.

Supporters claim the increase penalties will help end sexual harassment in the workplace. Those opposed to the law claim the law will excessively punish misunderstandings between employees.

After careful discussion, the committee (pictured above) voted to increase penalties for sexual harassment.

Option 2: Mixed panel – decrease (harassment_reduce_mixedgender.jpg)

The Arusha City Council formed a special committee to consider legislation that would decrease penalties for sexual harassment in the workplace. The law would restrict business' ability to discipline

employees found guilty of sexual harassment. Penalties could not include immediate suspension or termination of employment.

The law would use a standard definition of sexual harassment, which includes unwelcome sexual advances, requests for sexual favors, and other verbal or physical harassment of a sexual nature. In Tanzania, most sexual harassment complaints are filed by women.

Supporters claim the decreased penalties will protect employees who have experienced misunderstandings at work. Those opposed to the law claim the law will increase sexual harassment in the workplace.

After careful discussion, the committee (pictured above) voted to decrease penalties for sexual harassment.

Option 3: All male – increase (harassment_expand_allmale.jpg)

The Arusha City Council formed a special committee to consider legislation that would increase penalties for sexual harassment in the workplace. The law would require businesses to discipline employees found guilty of sexual harassment. Penalties could include immediate suspension or termination.

The law would use a standard definition of sexual harassment, which includes unwelcome sexual advances, requests for sexual favors, and other verbal or physical harassment of a sexual nature. In Tanzania, most sexual harassment complaints are filed by women.

Supporters claim the increase penalties will help end sexual harassment in the workplace. Those opposed to the law claim the law will excessively punish misunderstandings between employees.

After careful discussion, the committee (pictured above) voted to increase penalties for sexual harassment.

Option 4: All male – decrease (harassment_reduce_allmale.jpg)

The Arusha City Council formed a special committee to consider legislation that would decrease penalties for sexual harassment in the workplace. The law would restrict business' ability to discipline employees found guilty of sexual harassment. Penalties could not include immediate suspension or termination of employment.

The law would use a standard definition of sexual harassment, which includes unwelcome sexual advances, requests for sexual favors, and other verbal or physical harassment of a sexual nature. In Tanzania, most sexual harassment complaints are filed by women.

Supporters claim the decreased penalties will protect employees who have experienced misunderstandings at work. Those opposed to the law claim the law will increase sexual harassment in the workplace.

After careful discussion, the committee (pictured above) voted to decrease penalties for sexual harassment.

QI_1 In the article about sexual harassment, of the eight members, how many committee members on the committee discussing the sexual harassment law were women?

QI_2 I In the article about sexual harassment, what decision did the committee make regarding the sexual harassment law?

- ○ Increasing penalties for sexual harassment (1)
- ○ Decreasing penalties for sexual harassment (2)

Q_F_1 Do you agree or disagree with the following statement: Personally, I think the committee made the right decision.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Agree (3)
- ○ Strongly Agree (4)
- ○ Refused (5)

Q_F_2 Thinking about the gender composition of the committee, how fair was the decision-making process?

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Agree (3)
- ○ Strongly Agree (4)
- ○ Refused (5)

Q_F_3 Thinking about the gender composition of the committee, the committee can be trusted to make decisions that are right for the state's citizens.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Agree (3)
- ○ Strongly Agree (4)
- ○ Refused (5)

Q118

Please read the following hypothetical news story about laws regarding the number of special seats reserved for women in Parliament. You will be asked your opinion about the contents of the story. You will also be asked to recall some basic facts from the article.

Option 1: Mixed panel – increase (quota_expand_mixedgender.jpg)

A special committee in the Tanzanian Parliament was formed to consider increasing the special seats quota for women members of parliament (MPs), in which parties appoint a number of women proportional to their vote share gained from elected constituencies. It would change the number of seats guaranteed to be held by women from 35% to 50%.

Advocates of quota expansion claim it will result in more women MPs, counteracting voter and party officials' bias against electing women candidates. More women MPs will facilitate gender equality, they argue, because women MPs do a better job representing women's interests and serve a critical role model function that encourages women's leadership throughout society. Those opposed to quota expansion hold that gender equality can best be achieved if women and men candidates compete in the same competitive electoral process. Many opponents argue that men and women politicians are equally qualified to represent citizens of both genders. Others add that the quota stigmatizes women politicians - fellow politicians and voters view them as unqualified, or perhaps mere agents of their party.

The committee (pictured above) ultimately proposed to increase the women's quota from 35% to 50%.

Option 2: Mixed panel – decrease (quota_reduce_mixedgender.jpg)

A special committee in the Tanzanian Parliament was formed to consider decreasing the special seats quota for women members of parliament (MPs), in which parties appoint a number of women proportional to their vote share gained from elected constituencies. It would change the number of seats guaranteed to be held by women from 35% to 15%.

Advocates of quota reduction hold that gender equality can best be achieved if women and men candidates compete in the same competitive electoral process. Many supporters argue that men and women politicians are equally qualified to represent citizens of both genders. Others add that the quota stigmatizes women politicians - fellow politicians and voters view them as unqualified, or perhaps mere agents of their party. Those opposed to quota reduction claim it will result in fewer women MPs due to voter and party officials' bias against electing women candidates. Fewer women MPs will undermine gender equality, they argue, because women MPs do a better job representing women's interests and serve a critical role model function that encourages women's leadership throughout society.

The committee (pictured above) ultimately proposed to decrease the women's quota from 35% to 15%.

Option 3: All male – increase (quota_expand_allmale.jpg)

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Option 4: All male – decrease (quota_reduce_allmale.jpg)

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The committee (pictured above) ultimately proposed to decrease the women's quota from 35% to 15%.

QI_1 In the article about special seats in Parliament, of the eight members, how many committee members on the committee discussing special seats policy were women?

QI_2 I In the article about special seats in Parliament, what decision did the committee make regarding special seats for Parliament?

- ○ Increasing the special seats reserved for women from 35% to 50% (1)
- ○ Decreasing the special seats reserved for women from 35% to 15% (2)

Q_G_1 Do you agree or disagree with the following statement: Personally, I think the committee made the right decision.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Agree (3)
- ○ Strongly Agree (4)
- ○ Refused (5)

Q_G_2 Thinking about the gender composition of the committee, how fair was the decision-making process?

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Agree (3)
- ○ Strongly Agree (4)
- ○ Refused (5)

Q_G_3 Thinking about the gender composition of the committee, the committee can be trusted to make decisions that are right for the state's citizens.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Agree (3)
- ○ Strongly Agree (4)
- ○ Refused (5)

transition_bias We will now ask you questions about discrimination and ethics in the journalism profession.

Q_K_1 True or False: Unconscious bias always stems from the way we perceive differences in others and how we behave accordingly.

- ○ True (1)
- ○ False (2)

Q_K_2 What is affinity bias?

- ○ Believing something because your peers believe it.
- ○ Being more receptive of people who are like us in some way.
- ○ Looking for information that backs up our beliefs about someone.
- ○ Creating stereotypes based on groups people might belong to.

Q_K_3 What is confirmation bias?

- ○ Believing something because your peers believe it.
- ○ Looking for information that backs up our beliefs about someone.
- ○ Creating stereotypes based on groups people might belong to.
- ○ Being more receptive of people who are like us in some way.

Q_K_4 True or False: Tanzania has legal protections ensuring gender equality in the media.

- ○ True
- ○ False

Q_K_5 Which of the following is true for interviewing youth? (select all that apply)

- ○ Youth may provide consent to interview
- ○ They often talk too much
- ○ It is best to ask them Yes/No questions
- ○ Interviewing youth requires additional patience

Q_K_6 Should you use marked or unmarked vehicles with radio station branding when conducting reporting and interviewing?

- ○ Always marked
- ○ Always unmarked
- ○ It depends on the situation

transition_scenario **In this next section, we will ask you to comment on a set of hypothetical scenarios or pieces of media that are common in Tanzania.**

Randomized so either Q_J_male or Q_J_female appeared

Q_J_male Josephine is a student assigned to carry out a radio interview class project where they interview a local notable. He instead interviews a friend and pretends the friend is the notable. Should he be punished? What punishment would be most appropriate?

- ○ No punishment (1)
- ○ A warning (2)
- ○ A failing grade on the assignment (3)
- ○ A failing grade for the course (4)
- ○ Expulsion from the University (5)

Q_J_female Josephine is a student assigned to carry out a radio interview class project where they interview a local notable. She instead interviews a friend and pretends the friend is the notable. Should she be punished? What punishment would be most appropriate?

- ○ No punishment (1)
- ○ A warning (2)
- ○ A failing grade on the assignment (3)
- ○ A failing grade for the course (4)
- ○ Expulsion from the University (5)

Randomized so that either Q_K_CCM, Q_K_Opp or Q_K_none appears, followed by Q_K_1 and Q_K_2

Q_K_CCM A reporter is covering a story on a CCM local councilor (Diwani) who has been accused of engaging in fraud and bribery. The CCM local councilor admits the bribery to the reporter but claims the story is more complicated. The CCM local councilor asks the reporter to delay the story until they can give their public account. When leaving the interview, the local councilor offers the reporter a brown envelope to cover the reporter's expenses and time.

Q_K_opp A reporter is covering a story on a ACT-Wazalendo local councilor (Diwani) who has been accused of engaging in fraud and bribery. The ACT-Wazalendo local councilor admits the bribery to the reporter but claims the story is more complicated. The ACT-Wazalendo local councilor asks the reporter to delay the story until they can give their public account. When leaving the interview, the local councilor offers the reporter a brown envelope to cover the reporter's expenses and time.

Q_K_none A reporter is covering a story on local councilor (Diwani) who has been accused of engaging in fraud and bribery. The local councilor admits the bribery to the reporter but claims the story is more complicated. The local councilor asks the reporter to delay the story until they can give their public account. When leaving the interview, the local councilor offers the reporter a brown envelope to cover the reporter's expenses and time.

Q_K_1 What should the reporter do with the brown envelope?

- ○ Accept (1)
- ○ Decline (2)

Q_K_2 What should the reporter do with the story?

- ○ Run the story immediately (1)
- ○ Run the story after the diwani gives a public account (2)
- ○ Do not run the story (3)

Randomized so that either Q_L_CCM, Q_L_Opp or Q_L_none appears, followed by Q_L_I

Q_L_CCM A reporter is covering a story on a CCM Parliamentarian who rarely shows up to sessions and seldom speaks on the floor. The CCM Parliamentarian tells the reporter to stop the story and that if the reporter does not, the MP will get them fired and will send the police after them.

Q_L_opp A reporter is covering a story on a CHADEMA Parliamentarian who rarely shows up to sessions and seldom speaks on the floor. The CHADEMA Parliamentarian tells the reporter to stop the story and that if the reporter does not, the MP will get them fired and will send the police after them.

Q_L_none A reporter is covering a story on a Parliamentarian who rarely shows up to sessions and seldom speaks on the floor. The Parliamentarian tells the reporter to stop the story and that if the reporter does not, the MP will get them fired and will send the police after them.

Q_L_I What should the reporter do?

- ○ Definitely run the story (1)
- ○ Probably run the story (2)
- ○ Probably not run the story (3)
- ○ Definitely not run the story (4)

Randomized so either Q_M_male or Q_M_female appeared

Q_M_male A reporter is covering a story about Patrick Mpiri—a famous businessperson who is rumored to be carrying on affair. When they are interviewed by the reporter, Patrick tells the reporter that the rumors are true. Patrick asks the reporter to not run the story because of the embarrassment the story will cause him toward family and constituents. What should the reporter do?

- ○ Definitely run the story (1)
- ○ Probably run the story (2)
- ○ Probably not run the story (3)
- ○ Definitely not run the story (4)

Q_M_female A reporter is covering a story about Catherine Mpiri—a famous businessperson who is rumored to be carrying on affair. When they are interviewed by the reporter, Catherine tells the reporter that the rumors are true. Catherine asks the reporter to not run the story because of the embarrassment the story will her toward family and constituents. What should the reporter do?

- ○ Definitely run the story (1)
- ○ Probably run the story (2)
- ○ Probably not run the story (3)
- ○ Definitely not run the story (4)

Q_N_1 How confident are you that you could independently, without any input from others, produce a 5 minute radio spot?

- ○ I am completely able (1)
- ○ I am probably able (2)
- ○ I am probably unable (3)
- ○ I am completely unable (4)

Q_N_2 Please indicate the extent to which you agree or disagree with the following statements.

	(1) Strongly agree	(2) Agree	(3) Disagree	(4) Strongly Disagree	(5) Refused
I am well qualified to conduct investigative journalism.					
I have a good understanding of the important political issues facing our country.					
I have a good understanding of the important gender and youth issues facing our country.					
I could do as good a job as a journalist as most other people.					
People like me don't have any say about what government does					
Public officials don't care much about what journalists like me think					
Other students look to me as a leader.					

	(1) Strongly agree	(2) Agree	(3) Disagree	(4) Strongly Disagree	(5) Refused
I am motivated to mobilize my community to take action about important matters.					
One day in the future, I might consider running for political office.					
I can identify fake news easily.					

Q_N_3 Please indicate your strength in performing the following:

Area of expertise	(4) Strong	(3) Average	(2) Poor	(1) Very Poor	(99) Decline to Answer
Radio journalism					
Gender sensitive reporting					
Finding the story					
Covering the story					
Making the story					

Q_O_1 Have you ever considered running for office in student government?

- ○ Not at all (1)
- ○ Rarely (2)
- ○ Sometimes (3)
- ○ Frequently (4)
- ○ Refused (5)

Q_O_2 Have you ever considered running for political office?

- ○ Not at all (1)
- ○ Rarely (2)
- ○ Sometimes (3)
- ○ Frequently (4)
- ○ Refused (5)

Q_O_3 How often in the last month have you had discussions with others about sexual harassment?

- ○ Not at all (1)
- ○ Rarely (2)
- ○ Sometimes (3)
- ○ Frequently (4)
- ○ Refused (5)

Q_O_4 How often in the last month have you had discussions with others about political gender quotas?

- ○ Not at all (1)
- ○ Rarely (2)
- ○ Sometimes (3)
- ○ Frequently (4)
- ○ Refused (5)

Q_O_5 How often in the last month have you had discussions with others about fake news?

- ○ Not at all (1)
- ○ Rarely (2)
- ○ Sometimes (3)
- ○ Frequently (4)
- ○ Refused (5)

Q_O_6 When you're with other people, how often do you put on a show to impress or entertain them?

- ○ Always
- ○ Most of the time
- ○ Half of the time
- ○ Once in a while
- ○ Never

Q_O_7 How good or bad of an actor would you be?

- ○ Excellent
- ○ Good
- ○ Fair
- ○ Poor
- ○ Very Poor

Q_O_8 When you're in a group of people, how often are you the center of attention?

- ○ Always
- ○ Most of the time
- ○ Half of the time
- ○ Once in a while
- ○ Never

QO_9 Below is a list of the various political parties in Tanzania. For each party, please indicate how close you feel.

Area of expertise	Not at all close	A little close	Average	Very close	Extremely close
CCM					
CUF					
CHADEMA					
ACT-Wazalendo					
Other Party					

Q_O_10 What is your constituency?

Q_O_11 What is your local council?

Q_O_12 What is the name of your current Member of Parliament?

Q_O_13 What is the name of your current local councilor?

QX_0 Please confirm which of these is true for you

- ○ I was in the journalism training program (This Year) (1)
- ○ I was not in the journalism training program (This Year) (2)

QX_1 Did you have a training program/internship between June and October?

- ○ Yes, I had a training program/ internship (1)
- ○ No, I didn't have a training program / internship (2)

QX_2 Was the training program / internship related to journalism studies (such as journalism, media, and public relations) or a completely different area?

- ○ Same area (1)
- ○ Related Area (2)
- ○ Unrelated (3)
- ○ Not applicable (4)
- ○ I refuse to answer (5)

QX_3 What organization did you do your training program/internship with?

QX_4 Were you employed between June and October?

- ○ Yes, I was employed (1)
- ○ No, I was not employed (2)

QX_5 Was your job related to journalism studies (such as journalism, media, and public relations) or a completely different area?

- ○ Same area (1)
- ○ Related Area (2)
- ○ Unrelated (3)
- ○ Not applicable (4)
- ○ I refuse to answer (5)

QX_6 What organization did you work for?

QX_7 What position did you have in this organization?

QX_8 Did you complete the questionnaire from "NORC at the University of Chicago" in October 2019?

QX_9 Why didn't you complete the questionnaire? Please select all that apply.

- ○ I didn't receive an email about the questionnaire
- ○ I didn't get an SMS about the questionnaire
- ○ The participation compensation wasn't enough money
- ○ I didn't have a computer to complete the questionnaire
- ○ I didn't have network to complete the questionnaire
- ○ I wanted to do it but forgot
- ○ Other (provide response)

QZ_2 Did you discuss the journalism training provided by Internews with students who were selected for the training?

- ○ Never (1)
- ○ Rarely (2)
- ○ Several Times (3)
- ○ Frequently (4)

QZ_3 What did you learn from them?

QY_1A The name of your trainer (fill in)

QY_1B How would you rate your instructor's background knowledge in radio journalism in teaching the course?

- ○ Not at all knowledgeable (1)
- ○ Not very knowledgeable (2)
- ○ Somewhat knowledgeable (3)
- ○ Very knowledgeable (4)
- ○ Extremely knowledgeable (5)

QY_1C How would you rate your instructor's background knowledge in "diversity and inclusion" in Tanzanian society in teaching the course?

- ○ Not at all knowledgeable (1)
- ○ Not very knowledgeable (2)
- ○ Somewhat knowledgeable (3)
- ○ Very knowledgeable (4)
- ○ Extremely knowledgeable (5)

QY_1D How would you rate your instructor's typical teaching across the following characteristics? Please evaluate on a scale from 1-5 where 5 is extremely and 1 is not at all.

Rating	Very bad	Bad	Average	Good	Very Good	Refused
Enthusiasm regarding the material						
Effectiveness in communicating ideas						
Receptiveness in answering student questions						
Equitable treatment of male and female students:						
Encourage students to speak in class:						

QY_2A Would you rate the pace of class lessons too slow, too fast, or about right?

- ○ The pace was much too fast (1)
- ○ The pace was a little fast (2)
- ○ The pace was about right (3)
- ○ The pace was a little slow (4)
- ○ The pace was much too slow (5)

QZ_1 Have you done any of the following activities during the break period? Select all that apply

- ○ Creating a radio segment with others
- ○ Creating a radio segment by yourself
- ○ Received any practical training on making radio segment
- ○ Received any practical training on gender and youth issues in Tanzania
- ○ Helped your family with farming, a home business, and household work
- ○ Entertainment
- ○ Other

QZ_4 What topics are you most interested in reporting about? *Please select up to three responses*.

- ○ Rural issues (1)
- ○ Youth (2)
- ○ Women (3)
- ○ Sports (4)
- ○ Politics (5)
- ○ Economy (6)
- ○ Entertainment (7)
- ○ Other (8)

QZ_5 Have you changed the email or phone number you use in the last six months? If YES write them down below . If not, write "NO"

- ○ Email / Email [fill] (5) _____
- ○ Telephone number [fill] (6) _____

QZ_6 Did you know you can rent a recorder from college for recording interviews?

- ○ Yes (1)
- ○ No (2)

QZ_7 Did you know that the college has computers with Adobe Audition that you can reserve to use?

- ○ Yes (1)
- ○ No (2)

QZ_8 Do you know how to use Adobe Audition software to edit a radio audio segment?

- ○ Yes (1)
- ○ No (2)

SJMC students can rent a recorder from the campus throughout the day for recording interviews. There are 20 computers with Adobe Audition that you can reserve. To use these recorders or computers, contact Mr. Fanuel Hume of IT. His phone number is 0713549992.

SAU-T students can rent a recorder from the campus for recording interviews; the time will depend on the project. There are 50 computers with Adobe Audition that you can reserve. To use these recorders or computers, contact Dotto Bulendu. His phone numbers are 0787373550 or 0629093725.

QZ_10 Would you like and be able to participate in a contest to create a 5-minute audio segment at the end of the year, in which the top ten winners receive prizes and hose who have the highest-quality segments will be broadcast on the BBC?

- ○ Yes (1)
- ○ No (2)

IAT COMPONENT

WHAT IS "IAT"?

The implicit association test (IAT) measures the strength of associations between concepts (e.g., fat people, old people) and evaluations (e.g., good, bad) or stereotypes (e.g., athletic, clumsy). The main idea is that making a response is easier when closely related items share the same response key.

When doing an IAT you are asked to quickly sort words into categories that are on the left and right hand side of the computer screen by pressing the "E" key if the word belongs to the category on the left and the "I" key if the word belongs to the category on the right. The IAT has five main parts.

In the first part of the IAT, you sort words relating to the concepts (e.g., fat, thin) into categories. So if the category "Thin" was on the left, and a word related to being thin appeared on the screen, you would press the "E" key.

In the second part of the IAT, you sort words relating to the evaluation (e.g., good, bad). So if the category "Good" was on the left, and a pleasant word appeared on the screen, you would press the "E" key.

In the third part of the IAT, the categories are combined and you are asked to sort both concept and evaluation words. So the categories on the left hand side would be Thin/Good and the categories on the right hand side would be Fat/Bad.

In the fourth part of the IAT, the placement of the concepts switches. If the category "Thin" was previously on the left, now it would be on the right.

In the final part of the IAT, the categories are combined in a way that is opposite what they were before. If the category on the left was previously Thin/Good, it would now be Thin/Bad.

The IAT score is based on how long it takes a person, on average, to sort the words in the third part of the IAT versus the fifth part of the IAT. We would say that one has an implicit preference for thin people relative to fat people if they are faster to categorize words when Thin and Good share a response key and Fat and Bad share a response key, relative to the reverse.

The information you provide is confidential. Only the researchers from NORC will have access to the data. The information you and others provide will be summarized in a report. Your name or any other identifying information will never be used when we report results of the test.

Your participation in this test is completely voluntary – it is your choice to take this test or not. If you feel uneasy with any of the questions, you may stop the test at any time. If you decide not to take part or to stop the test, you will not lose any services that you are otherwise receiving.

By clicking the 'Take the test' button at the bottom right of the screen, you acknowledge your acceptance to participate in this test. Thank you very much for your participation.

Let's start with a warm-up IAT. In this study you will complete an Implicit Association Test (IAT) in which you will be asked to sort words into groups as fast as you can. This study should take about 15 minutes to complete.

1. Instructions: Place your left and right index fingers on the E and I keys. At the top of the screen are 2 categories. In the task, words and/or images appear in the middle of the screen.

   When the word/image belongs to the category on the left, press the E key as fast as you can. When it belongs to the category on the right, press the I key as fast as you can. If you make an error, a red X will appear. Correct errors by hitting the other key.

   Please try to go as fast as you can while making as few errors as possible.

   When you are ready, please press the [Space] bar to begin.

2. Now, the categories have changed, but the rules remain the same. Please try to go as *fast as you can* while making as few errors as possible. Correct errors by hitting the other key.

   When you are ready, please press the [Space] bar to begin.

3. Now the four categories you saw separately will appear together. Remember, each word/image fits in only one of the four categories. The label/item colors may help you identify the appropriate category.

   Use the **E** key for the two categories on the left and the **I** key for the two categories on the right. Again, try to go as fast as possible without making mistakes. Correct errors by hitting the other key. Practice this combination now.

   When you are ready, please press the [Space] bar to begin.

4. Please continue the task as you were just doing it. Again, try to go as fast as possible without making mistakes. Correct errors by hitting the other key.

   When you are ready, please press the [Space] bar to begin.

5. Notice the categories from before have switched sides. Please practice this new configuration now. Remember to try to go as *fast as you can* while making as few errors as possible. Correct errors by hitting the other key.

   When you are ready, please press the [Space] bar to begin.

6. Notice the four categories have been combined again, but in a new configuration. Please practice this combination now, and remember to go as fast as you can while making as few mistakes as possible.Correct errors by hitting the other key.

   When you are ready, please press the [Space] bar to begin.

7. Please continue the task as you were just doing it, and remember to go as fast as you can while making as few mistakes as possible. Correct errors by hitting the other key.

   When you are ready, please press the [Space] bar to begin.

Press E or I to advance to the next word/image. Correct mistakes by pressing the other key.

Good job! Now we can begin with the real IAT. Again, you will be asked to sort words into groups as fast as you can.

That marks the end of the test. Thank you again for your participation.

APPENDIX B: REGRESSION RESULTS

1 Knowledge of Uni Resource Access

	(1) Access Uni Recorders? b/se	(2) Access Uni Computers? b/se	(3) Use Edit Software? b/se
main			
Program	-0.07	0.73	2.19***
	(0.233)	(0.771)	(0.638)
Constant	1.20***	3.72***	2.26***
	(0.183)	(0.507)	(0.263)
Observations	428	428	428

* pj0.10, ** pj0.05, *** pj0.01

Table 1: Knowledge of Uni Resource Access Logistic Regression Results

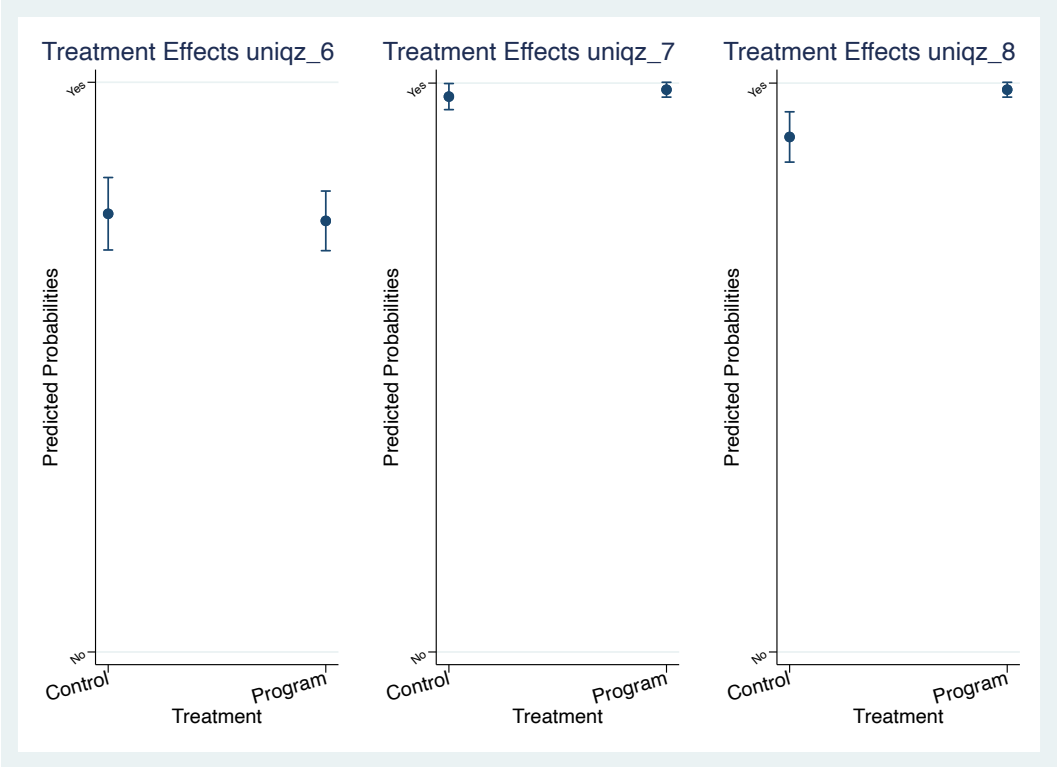

Figure 1: Knowledge of Uni Resource Access Predicted Values

2 Question 1: Content Battery

	(1) Q1.1 Correct b/se	(2) Q1.2 Correct b/se	(3) Q1.3 Correct b/se	(4) Q1.4 Correct b/se
main				
Program	0.18	0.42**	-0.57	-0.41
	(0.212)	(0.187)	(0.420)	(0.366)
Constant	1.10***	0.35**	-2.71***	-2.48***
	(0.160)	(0.141)	(0.287)	(0.260)
Observations	512	512	512	512

* p¡0.10, ** p¡0.05, *** p¡0.01

Table 2: Q1 Battery Logistic Regression Results

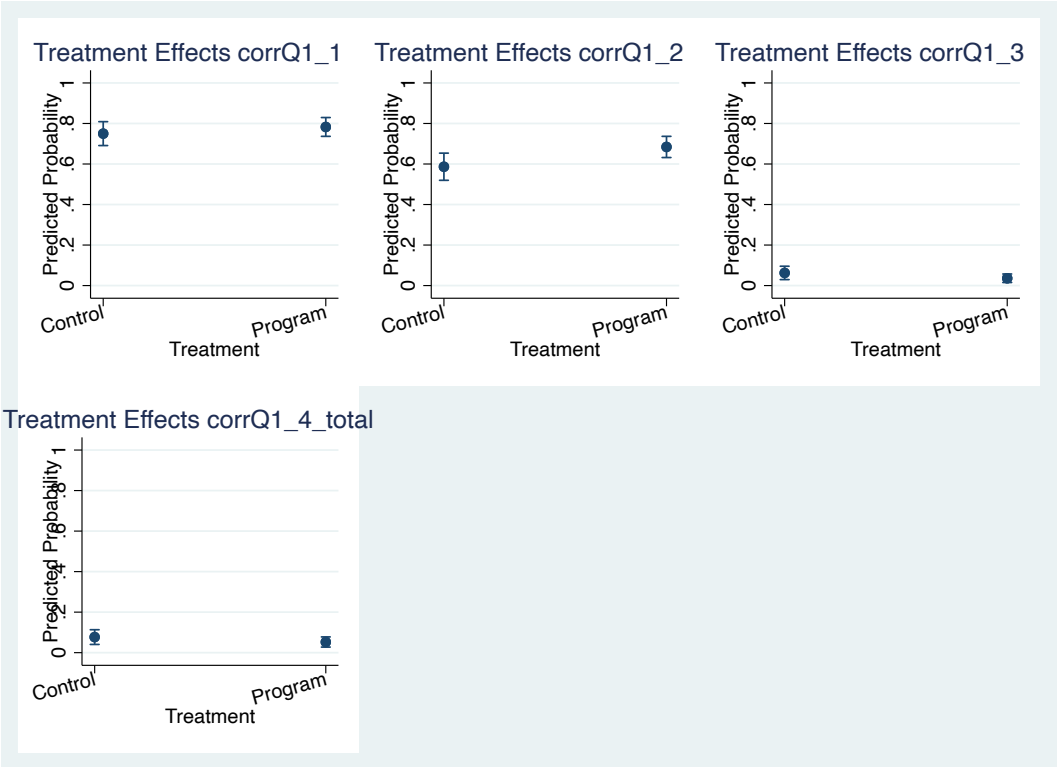

Figure 2: Q1 Battery Predicted Probabilities

3 Question 2: Production Battery

	(1) corrQ2_1 b/se	(2) corrQ2_2_total b/se
main		
Program	0.30	0.32
	(0.194)	(0.240)
Constant	-0.88***	-1.70***
	(0.152)	(0.192)
Observations	512	512

* p¡0.10, ** p¡0.05, *** p¡0.01

Table 3: Q2 Battery Logistic Regression Results

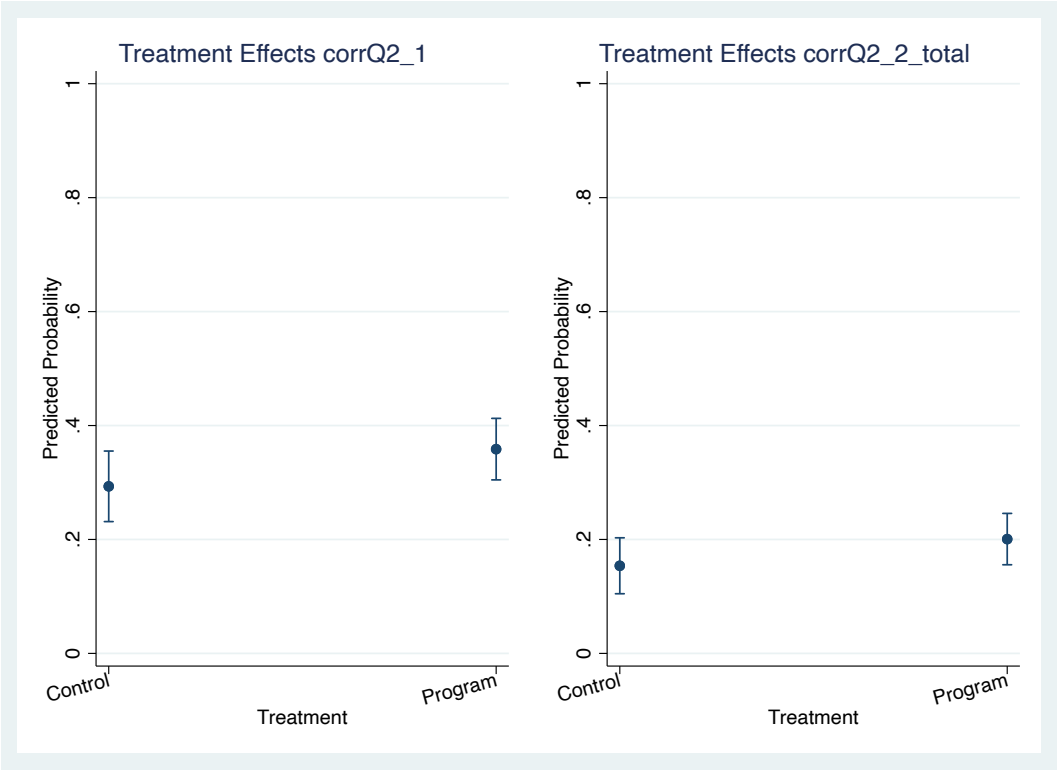

Figure 3: Q2 Battery Predicted Probabilities

4 Question K: Ethics Battery

	(1) QK.1 Correct b/se	(2) QK.2 Correct b/se	(3) QK.3 Correct b/se	(4) QK.4 Correct b/se	(5) QK.5 Correct b/se
main					
Program	-0.53	0.41*	0.11	0.07	-0.17
	(0.347)	(0.211)	(0.200)	(0.190)	(0.263)
Constant	-2.30***	-1.29***	-0.97***	-0.68***	-1.78***
	(0.241)	(0.169)	(0.156)	(0.147)	(0.198)
Observations	512	512	512	512	512

* p¡0.10, ** p¡0.05, *** p¡0.01

Table 4: QK Battery Logistic Regression Results

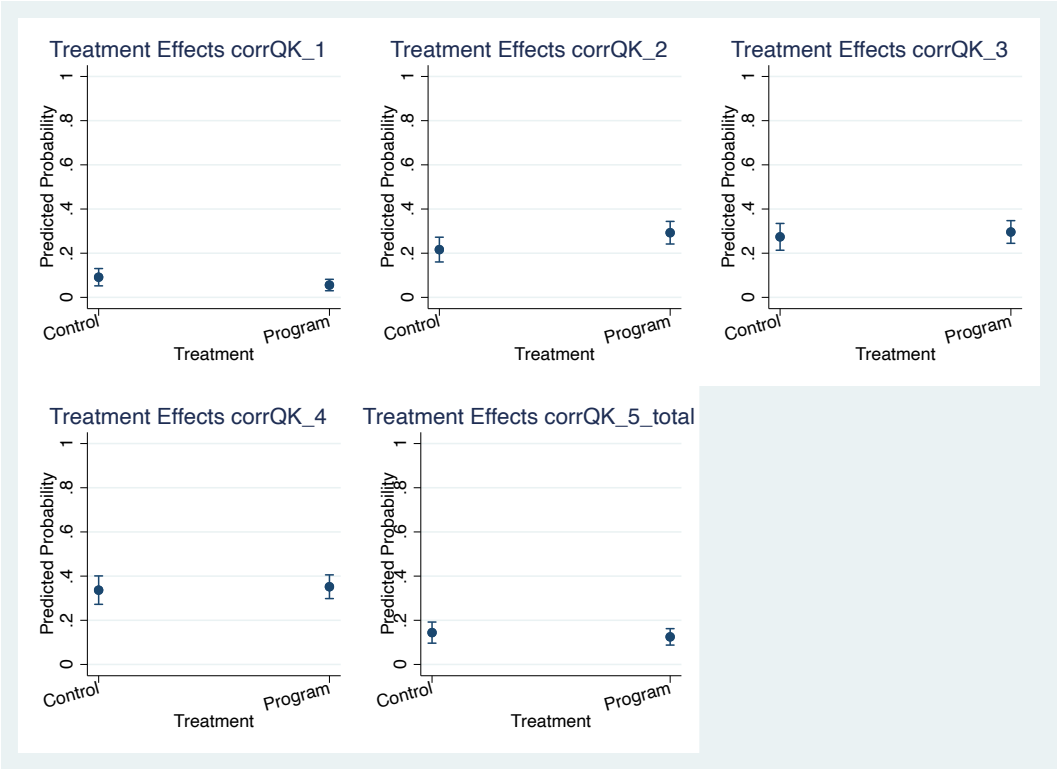

Figure 4: QK Battery Predicted Probabilities

5 Implicit Association Test

	(1)
	1 Dscore
	b/se
Program	0.05
	(0.033)
Constant	0.15***
	(0.027)
Observations	391

* p¡0.10, ** p¡0.05, *** p¡0.01

Table 5: IAT Regression Results

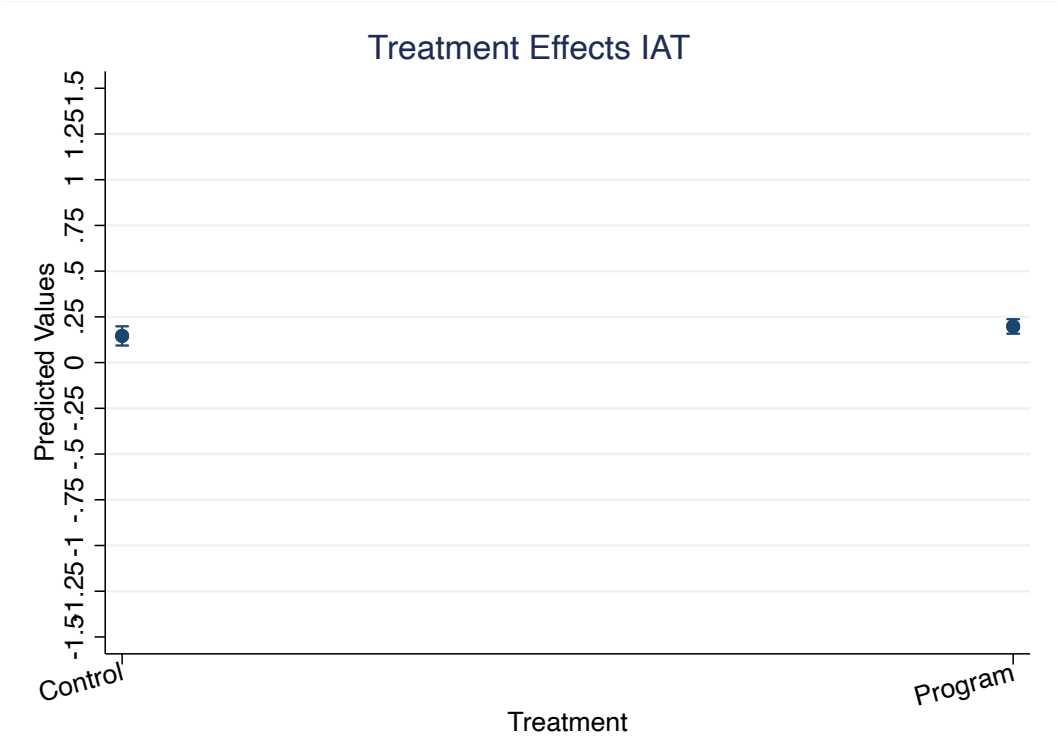

Figure 5: IAT Predicted Values

6 Question N: Efficacy Battery

	(1) Radio Journalism b/se	(2) Gender Sensitive Reporting b/se	(3) Finding Story b/se	(4) Covering Story b/se	(5) Making Story b/se
Program	0.08*	0.06	0.03	0.05	0.15***
	(0.040)	(0.045)	(0.039)	(0.041)	(0.044)
Constant	2.70***	2.62***	2.75***	2.71***	2.61***
	(0.032)	(0.035)	(0.030)	(0.032)	(0.036)
Observations	511	511	511	511	510

* p¡0.10, ** p¡0.05, *** p¡0.01

Table 6: Journalism Ability Self Reported Strength Regression Results

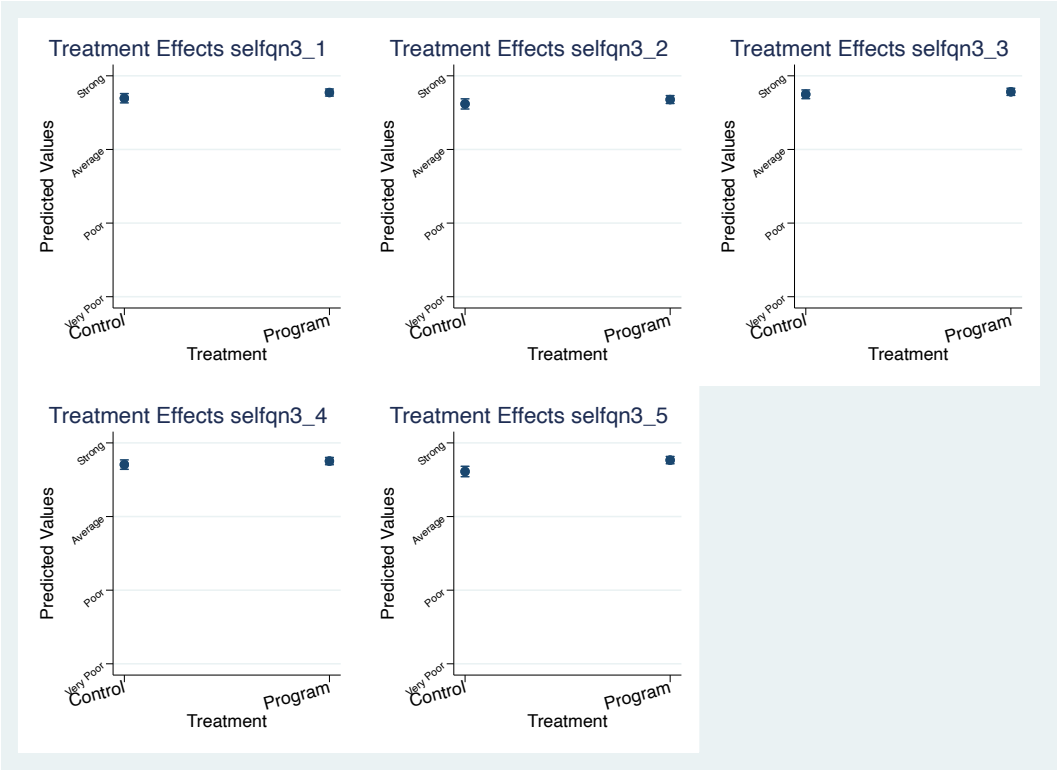

Figure 6: Journalism Ability Self Reported Strength Predicted Values

	(1) Qualified Investigative Journalism b/se	(2) My Skill v. Most b/se	(3) Can Mobilize Community b/se	(4) Can Identify Fake News b/se
Program	-0.07	-0.02	0.05	0.14***
	(0.065)	(0.046)	(0.041)	(0.050)
Constant	2.31***	2.71***	2.71***	2.58***
	(0.050)	(0.034)	(0.032)	(0.042)
Observations	498	510	512	511

* p¡0.10, ** p¡0.05, *** p¡0.01

Table 7: Journalism Efficacy Regression Results

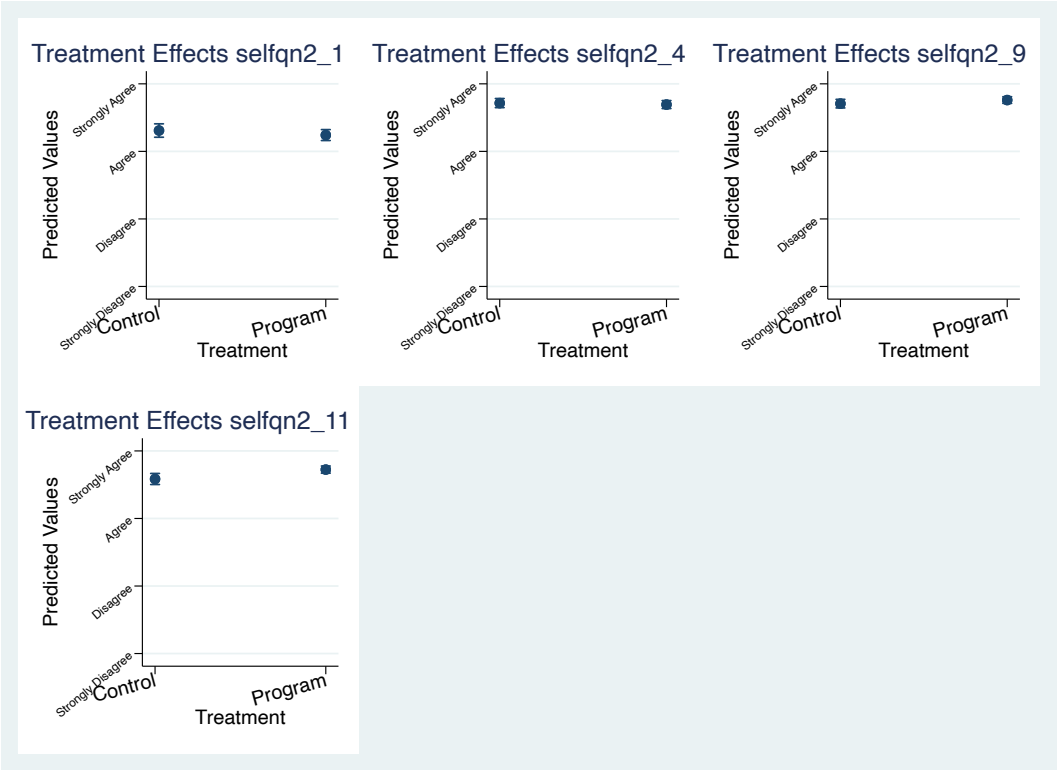

Figure 7: Journalism Efficacy Predicted Values

7 Topical Interest for Journalism

	(1) Rural b/se	(2) Youth b/se	(3) Women b/se	(4) Sports b/se	(5) Politics b/se	(6) Economy b/se	(7) Entertainment b/se
main							
Program	0.59***	0.21	0.53***	-0.42*	-0.21	-0.30	-0.66***
	(0.200)	(0.220)	(0.203)	(0.235)	(0.263)	(0.338)	(0.236)
Constant	-0.11	0.84***	0.13	-1.01***	-1.49***	-2.13***	-0.90***
	(0.154)	(0.168)	(0.154)	(0.174)	(0.199)	(0.250)	(0.170)
Observations	428	428	428	428	428	428	428

* p¡0.10, ** p¡0.05, *** p¡0.01

Table 8: Topical Interest Logistic Regression Results

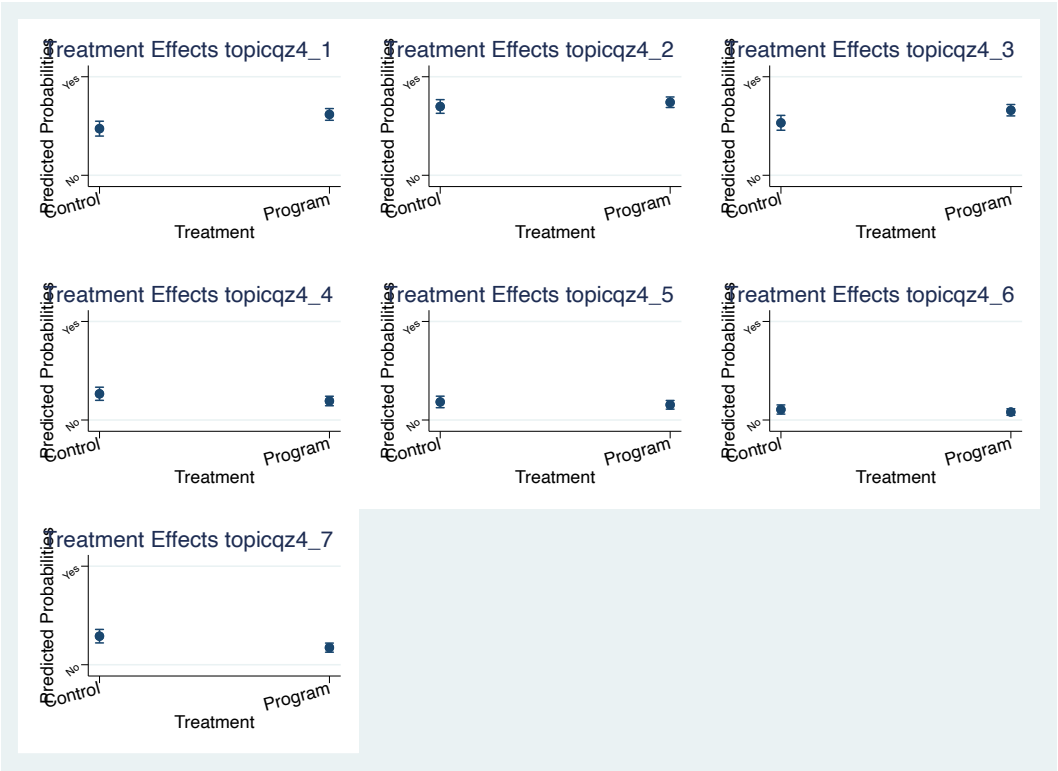

Figure 8: Topical Interest Logistic Predicted Values

8 Willingness to Participate in Contest to Produce Short Radio Segments

	(1) Participate Contest b/se
Program	0.00
	(0.025)
Constant	1.96***
	(0.019)
Observations	428

* p¡0.10, ** p¡0.05, *** p¡0.01

Table 9: Participate in Contest Regression Results

Figure 9: Participate in Contest Predicted Values

9 Other Statistical Analysis

9.1 Balance Checks Program and No Program

9.2 Heterogeneous Treatment Effects: Gender

9.2.1 Question 1: Content Battery

	(1) Q1.1 Correct b/se	(2) Q1.2 Correct b/se	(3) Q1.3 Correct b/se	(4) Q1.4 Correct b/se
main				
Program	0.22	0.32	-0.58	-0.40
	(0.279)	(0.244)	(0.618)	(0.515)
Female	-0.15	-0.27	0.67	0.37
	(0.331)	(0.293)	(0.577)	(0.540)
Program × Female	-0.05	0.19	-0.25	0.06
	(0.434)	(0.386)	(0.865)	(0.746)
Constant	1.15***	0.47**	-2.99***	-2.68***
	(0.210)	(0.184)	(0.419)	(0.366)
Observations	508	508	508	508

* p¡0.10, ** p¡0.05, *** p¡0.01

Table 10: Q1 Battery Logistic Regression Results

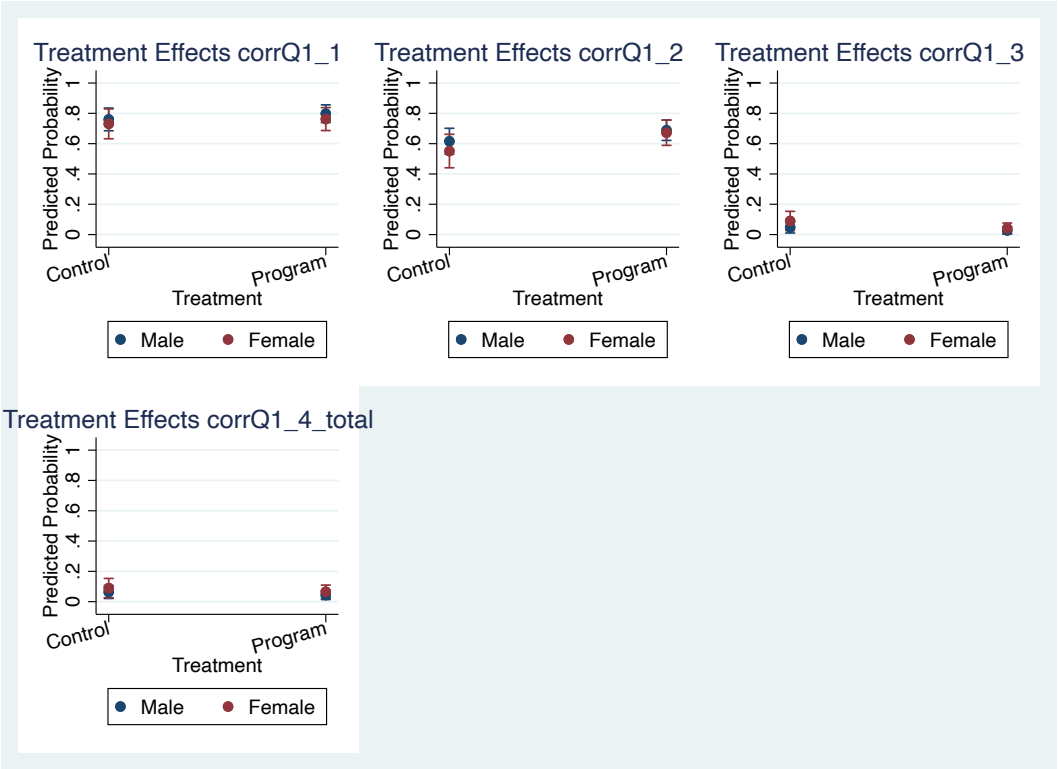

Figure 10: Q1 Battery Predicted Probabilities

9.2.2 Question 2: Production Battery

	(1) Q2.1 Correct b/se	(2) Q2.2 Correct b/se
main		
Program	0.34	-0.10
	(0.244)	(0.304)
Female	-0.38	-0.68
	(0.326)	(0.439)
Program × Female	-0.08	1.10**
	(0.411)	(0.526)
Constant	-0.75***	-1.49***
	(0.192)	(0.231)
Observations	508	508

* p¡0.10, ** p¡0.05, *** p¡0.01

Table 11: Q2 Battery Logistic Regression Results

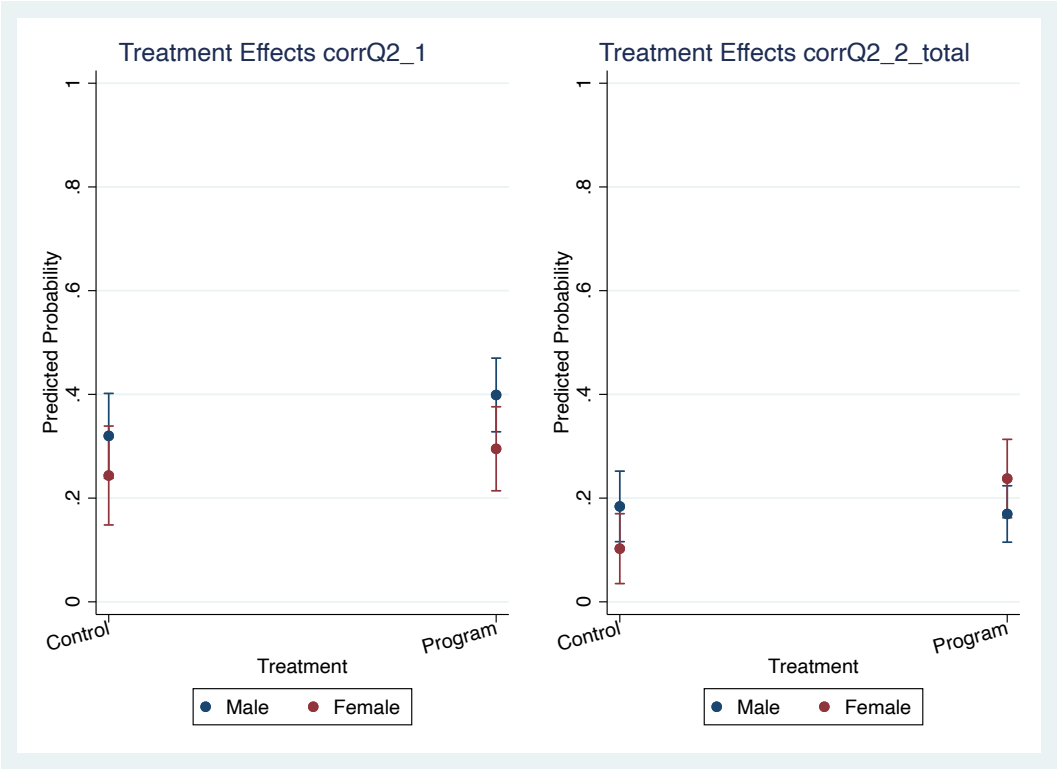

Figure 11: Q2 Battery Predicted Probabilities

9.2.3 Question K: Ethics Battery

	(1) QK.1 Correct b/se	(2) QK.2 Correct b/se	(3) QK.3 Correct b/se	(4) QK.4 Correct b/se	(5) QK.5 Correct b/se
main					
Program	-0.32	0.30	0.31	-0.06	-0.20
	(0.435)	(0.268)	(0.265)	(0.235)	(0.320)
Female	0.17	-0.24	0.46	-1.05***	-0.44
	(0.489)	(0.357)	(0.319)	(0.334)	(0.428)
Program × Female	-0.67	0.26	-0.53	0.46	0.02
	(0.733)	(0.440)	(0.410)	(0.418)	(0.566)
Constant	-2.34***	-1.20***	-1.15***	-0.31*	-1.60***
	(0.316)	(0.212)	(0.210)	(0.181)	(0.239)
Observations	508	508	508	508	508

* p¡0.10, ** p¡0.05, *** p¡0.01

Table 12: QK Battery Logistic Regression Results

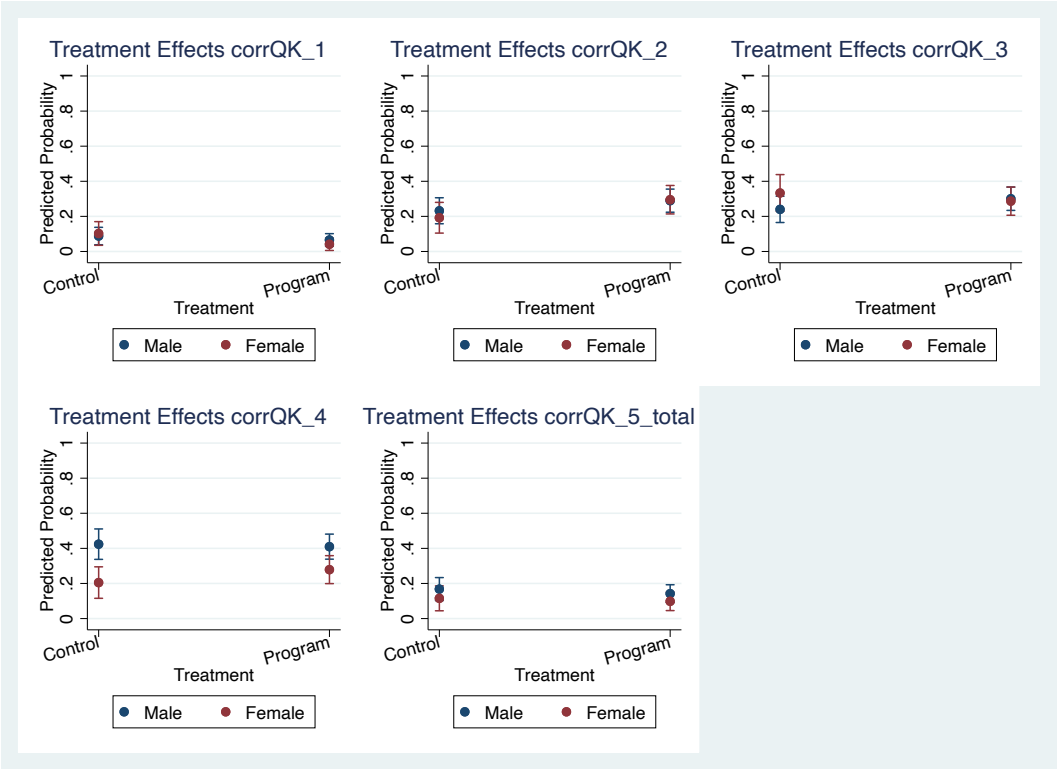

Figure 12: QK Battery Predicted Probabilities

9.2.4 Implicit Association Test

	(1) 1 Dscore b/se
Program	0.07*
	(0.039)
Female	0.21***
	(0.047)
Program × Female	-0.05
	(0.059)
Constant	0.07**
	(0.030)
Observations	468

* p¡0.10, ** p¡0.05, *** p¡0.01

Table 13: IAT Regression Results

Figure 13: IAT Predicted Values

9.2.5 Question N: Efficacy Battery

	(1) Radio Journalism b/se	(2) Gender Sensitive Reporting b/se	(3) Finding Story b/se	(4) Covering Story b/se	(5) Making Story b/se
Program	0.10**	0.03	0.09*	0.04	0.11**
	(0.051)	(0.060)	(0.051)	(0.053)	(0.054)
Female	-0.06	0.03	0.04	-0.03	-0.16**
	(0.068)	(0.072)	(0.063)	(0.069)	(0.077)
Program × Female	-0.04	0.09	-0.12	0.03	0.13
	(0.085)	(0.090)	(0.080)	(0.086)	(0.093)
Constant	2.71***	2.60***	2.73***	2.71***	2.67***
	(0.041)	(0.047)	(0.040)	(0.041)	(0.044)
Observations	507	507	507	507	506

* p¡0.10, ** p¡0.05, *** p¡0.01

Table 14: Journalism Ability Self Reported Strength Regression Results

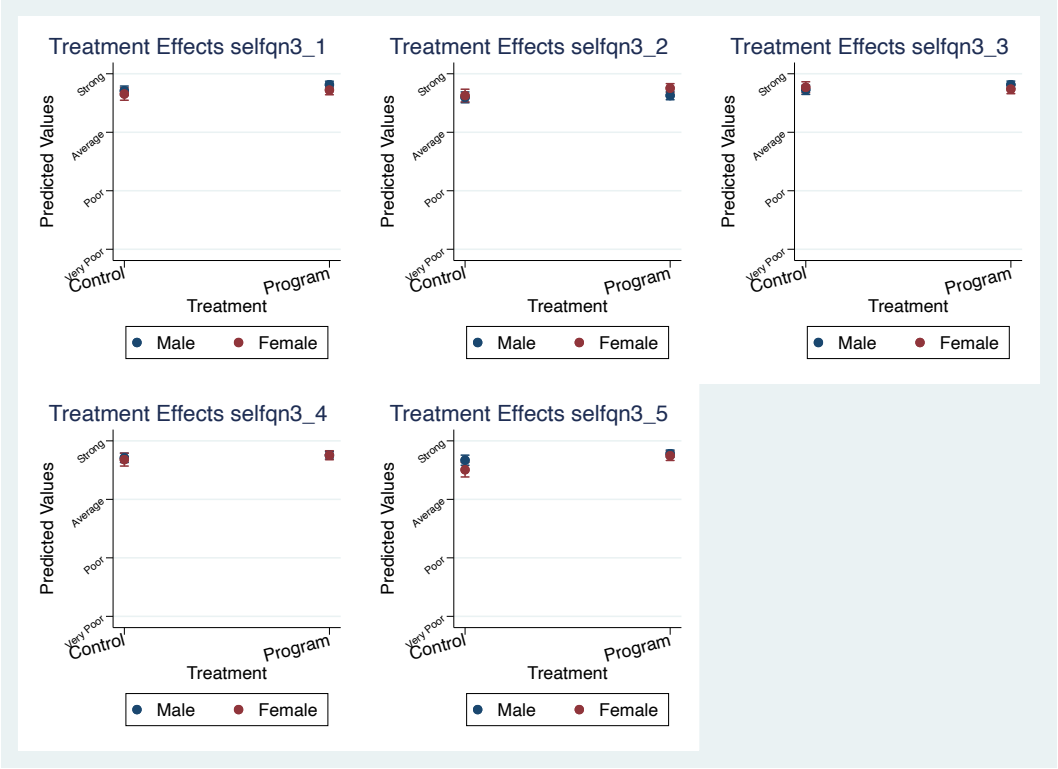

Figure 14: Journalism Ability Self Reported Strength Predicted Values

	(1) Qualified Investigative Journalism b/se	(2) My Skill v. Most b/se	(3) Can Mobilize Community b/se	(4) Can Identify Fake News b/se
Program	-0.07	-0.05	0.03	0.13**
	(0.082)	(0.057)	(0.051)	(0.061)
Female	-0.19*	-0.09	-0.10	-0.16*
	(0.106)	(0.075)	(0.068)	(0.089)
Program × Female	0.03	0.07	0.06	0.07
	(0.136)	(0.096)	(0.086)	(0.105)
Constant	2.38***	2.75***	2.74***	2.64***
	(0.064)	(0.040)	(0.041)	(0.051)
Observations	494	506	508	507

* p¡0.10, ** p¡0.05, *** p¡0.01

Table 15: Journalism Efficacy Regression Results

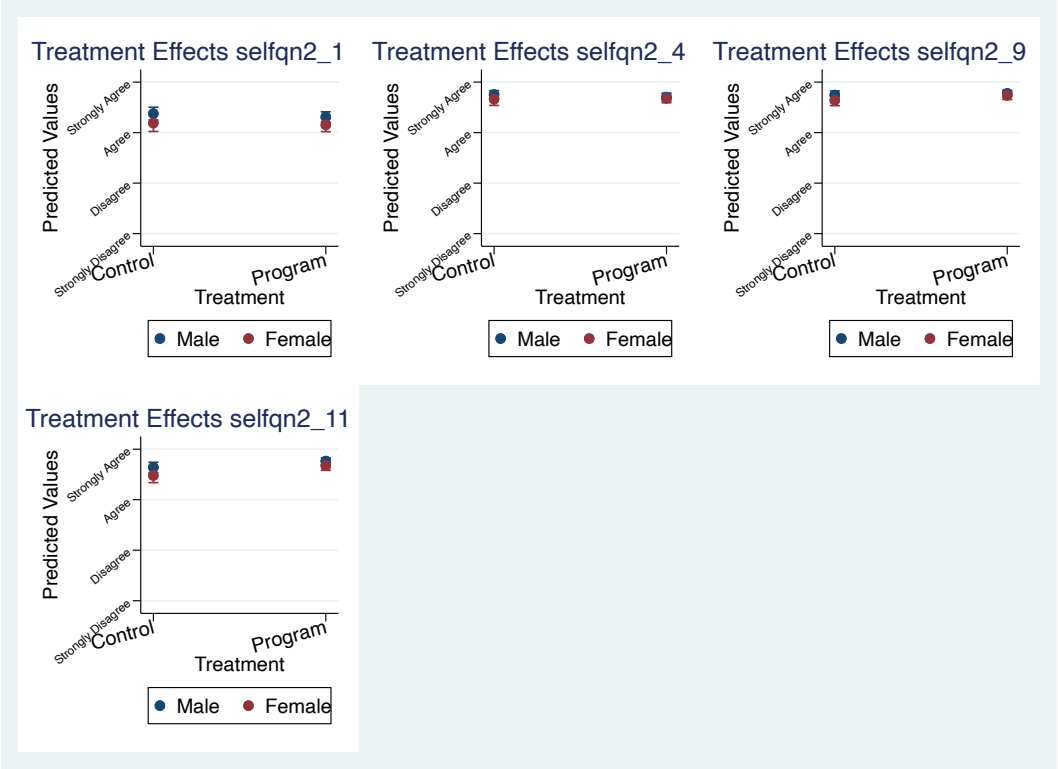

Figure 15: Journalism Efficacy Predicted Values

9.2.6 Topical Interest for Journalism

	(1) Rural b/se	(2) Youth b/se	(3) Women b/se	(4) Sports b/se	(5) Politics b/se	(6) Economy b/se	(7) Entertainment b/se
main							
Program	0.55**	0.37	0.85***	-0.47*	-0.27	-0.76*	-0.72***
	(0.235)	(0.256)	(0.241)	(0.257)	(0.266)	(0.416)	(0.278)
Female	-0.17	0.28	2.29***	-1.49***	-1.54***	0.19	-0.13
	(0.291)	(0.319)	(0.358)	(0.419)	(0.470)	(0.427)	(0.322)
Program × Female	0.19	-0.30	-0.56	0.82	-0.21	0.35	0.26
	(0.377)	(0.417)	(0.472)	(0.523)	(0.654)	(0.609)	(0.443)
Constant	-0.14	0.72***	-0.68***	-0.68***	-0.94***	-1.99***	-0.87***
	(0.180)	(0.191)	(0.190)	(0.190)	(0.199)	(0.276)	(0.196)
Observations	508	508	508	508	508	508	508

* p¡0.10, ** p¡0.05, *** p¡0.01

Table 16: Topical Interest Logistic Regression Results

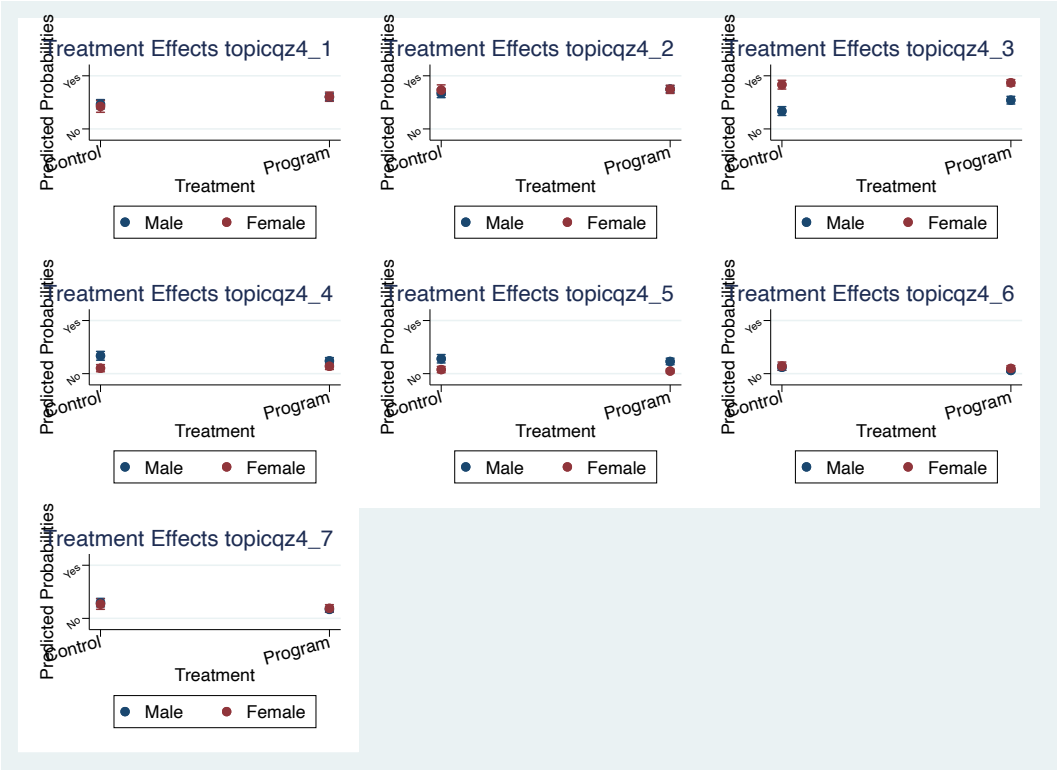

Figure 16: Topical Interest Logistic Predicted Values

9.2.7 Willingness to Participate in Contest to Produce Short Radio Segments

	(1) Participate Contest b/se
Program	0.00
	(0.025)
Female	-0.06
	(0.049)
Program × Female	0.03
	(0.060)
Constant	1.97***
	(0.019)
Observations	508

* p¡0.10, ** p¡0.05, *** p¡0.01

Table 17: Participate in Contest Regression Results

Figure 17: Participate in Contest Predicted Values

9.3 Heterogeneous Treatment Effects: Major

9.3.1 Question 1: Content Battery

	(1) Q1.1 Correct b/se	(2) Q1.2 Correct b/se	(3) Q1.3 Correct b/se	(4) Q1.4 Correct b/se
main				
Program	-0.26	0.45*	-0.78	-0.48
	(0.301)	(0.264)	(0.572)	(0.535)
MassComm	-0.07	0.13	-1.09	0.37
	(0.454)	(0.389)	(1.088)	(0.658)
PR	-0.47	0.02	0.01	-0.23
	(0.361)	(0.322)	(0.609)	(0.648)
Program × MassComm	1.29*	0.39	0.49	-0.14
	(0.676)	(0.542)	(1.542)	(0.959)
Program × PR	0.92*	-0.40	0.07	0.55
	(0.492)	(0.428)	(0.944)	(0.875)
Constant	1.27***	0.34	-2.54***	-2.54***
	(0.247)	(0.207)	(0.393)	(0.393)
Observations	508	508	508	508

* p¡0.10, ** p¡0.05, *** p¡0.01

Table 18: Q1 Battery Logistic Regression Results

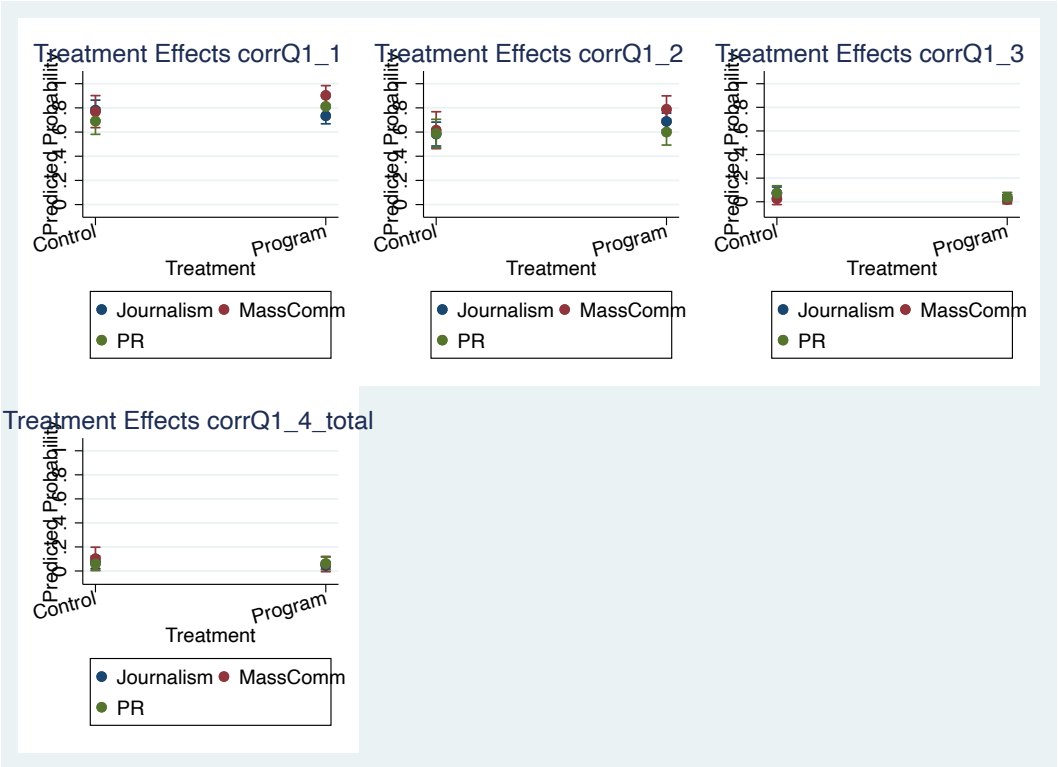

Figure 18: Q1 Battery Predicted Probabilities

9.3.2 Question 2: Production Battery

	(1) Q2.1 Correct b/se	(2) Q2.2 Correct b/se
main		
Program	0.12	0.32
	(0.288)	(0.348)
MassComm	0.35	0.25
	(0.412)	(0.508)
PR	0.24	0.01
	(0.351)	(0.449)
Program × MassComm	0.58	0.29
	(0.525)	(0.624)
Program × PR	0.39	-0.30
	(0.451)	(0.581)
Constant	-1.04***	-1.77***
	(0.233)	(0.289)
Observations	508	508

* p¡0.10, ** p¡0.05, *** p¡0.01

Table 19: Q2 Battery Logistic Regression Results

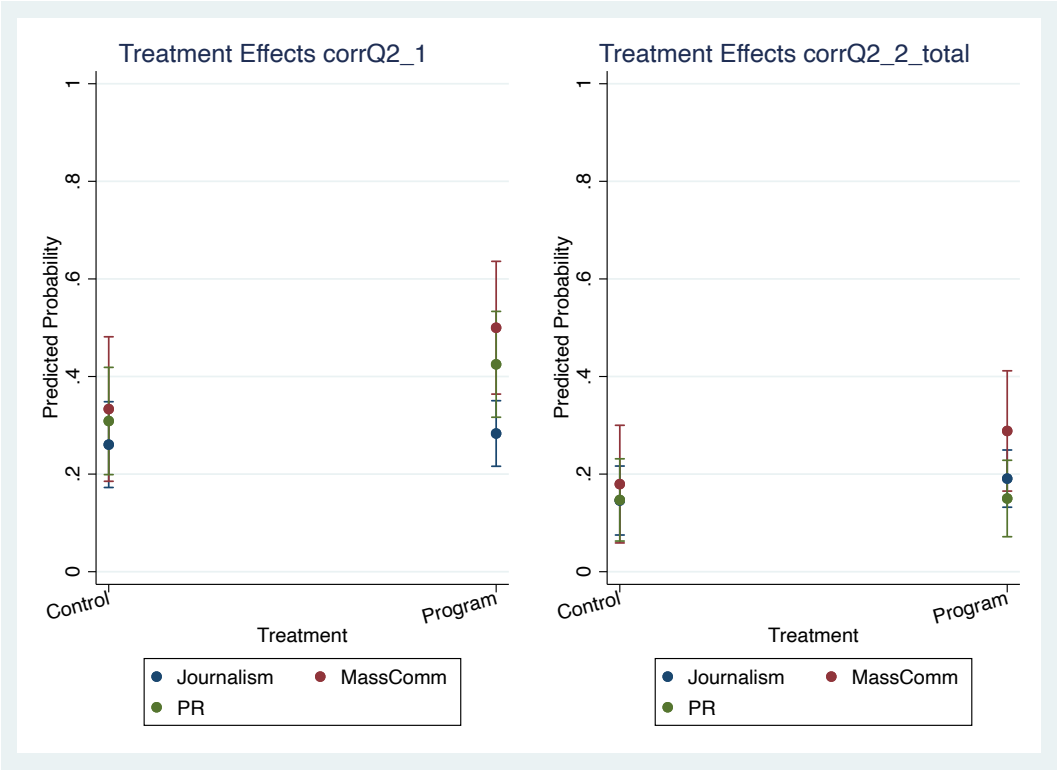

Figure 19: Q2 Battery Predicted Probabilities

9.3.3 Question K: Ethics Battery

	(1) QK.1 Correct b/se	(2) QK.2 Correct b/se	(3) QK.3 Correct b/se	(4) QK.4 Correct b/se	(5) QK.5 Correct b/se
main					
Program	-0.64	0.46	-0.11	0.20	0.03
	(0.447)	(0.320)	(0.277)	(0.274)	(0.371)
MassComm	-0.87	0.60	-0.42	0.26	0.65
	(0.794)	(0.446)	(0.440)	(0.401)	(0.484)
PR	-0.29	0.36	-0.31	0.36	-0.16
	(0.535)	(0.392)	(0.357)	(0.335)	(0.481)
Program × MassComm	0.00	0.16	1.16**	0.30	-1.62**
	(.)	(0.555)	(0.547)	(0.514)	(0.798)
Program × PR	0.47	-0.19	-0.18	-0.57	0.15
	(0.751)	(0.495)	(0.483)	(0.444)	(0.621)
Constant	-2.04***	-1.54***	-0.79***	-0.84***	-1.85***
	(0.321)	(0.268)	(0.220)	(0.222)	(0.299)
Observations	456	508	508	508	508

* p¡0.10, ** p¡0.05, *** p¡0.01

Table 20: QK Battery Logistic Regression Results

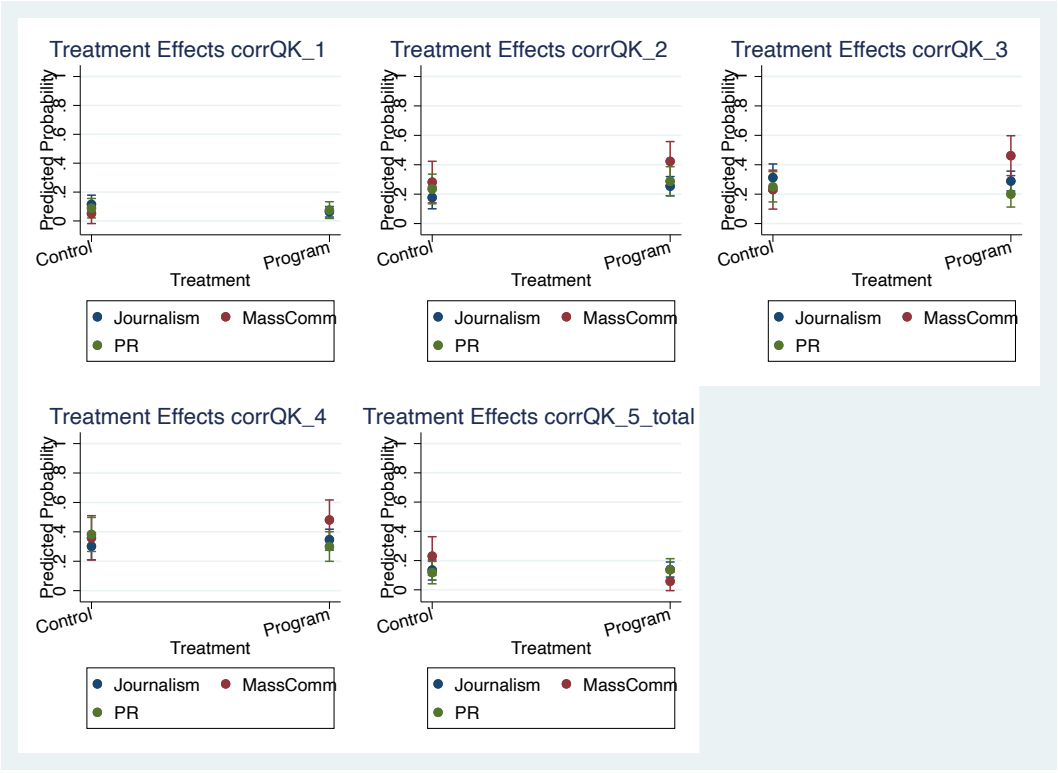

Figure 20: QK Battery Predicted Probabilities

9.3.4 Implicit Association Test

	(1) 1 Dscore b/se
Program	0.11**
	(0.044)
MassComm	0.11*
	(0.066)
PR	0.07
	(0.054)
Program × MassComm	-0.14*
	(0.082)
Program × PR	-0.10
	(0.070)
Constant	0.11***
	(0.036)
Observations	468

* p¡0.10, ** p¡0.05, *** p¡0.01

Table 21: IAT Regression Results

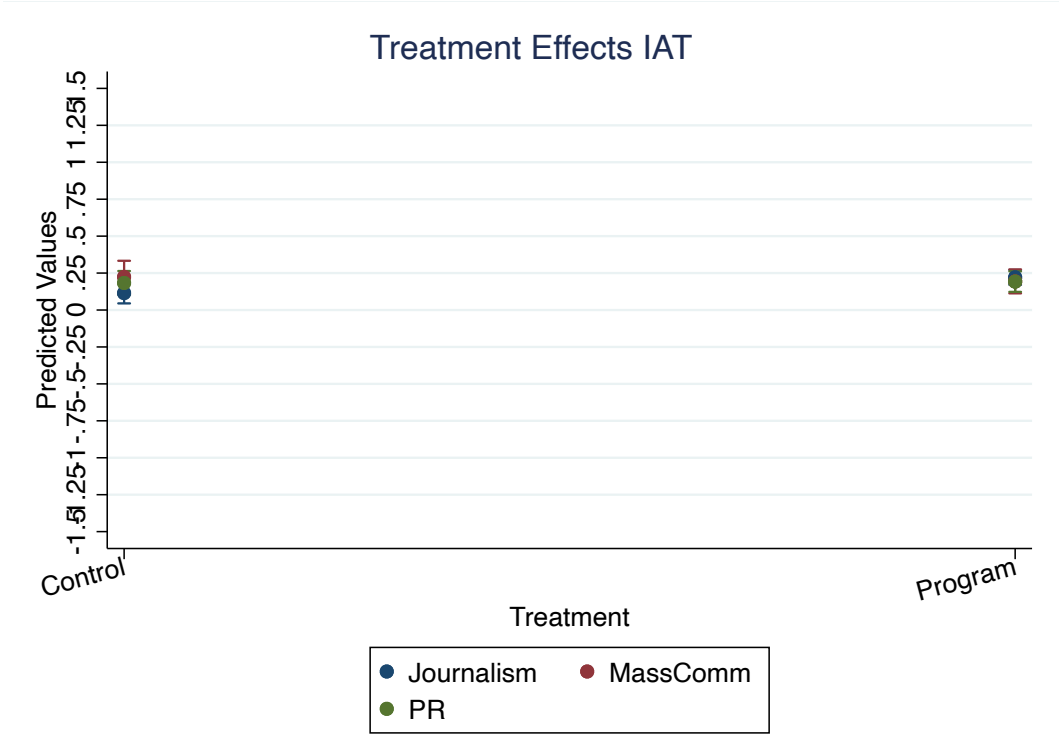

Figure 21: IAT Predicted Values

9.3.5 Question N: Efficacy Battery

	(1) Radio Journalism b/se	(2) Gender Sensitive Reporting b/se	(3) Finding Story b/se	(4) Covering Story b/se	(5) Making Story b/se
Program	0.09*	-0.01	0.03	0.09	0.10*
	(0.056)	(0.062)	(0.055)	(0.057)	(0.059)
MassComm	0.12	-0.09	0.02	0.11	-0.05
	(0.078)	(0.094)	(0.081)	(0.081)	(0.099)
PR	-0.10	-0.15*	-0.03	-0.03	-0.22***
	(0.077)	(0.082)	(0.071)	(0.078)	(0.082)
Program × MassComm	-0.03	0.15	0.05	-0.10	0.04
	(0.095)	(0.118)	(0.101)	(0.104)	(0.119)
Program × PR	-0.02	0.15	0.00	-0.07	0.13
	(0.100)	(0.106)	(0.094)	(0.101)	(0.104)
Constant	2.70***	2.68***	2.75***	2.69***	2.69***
	(0.047)	(0.050)	(0.044)	(0.048)	(0.050)
Observations	507	507	507	507	506

* p¡0.10, ** p¡0.05, *** p¡0.01

Table 22: Journalism Ability Self Reported Strength Regression Results

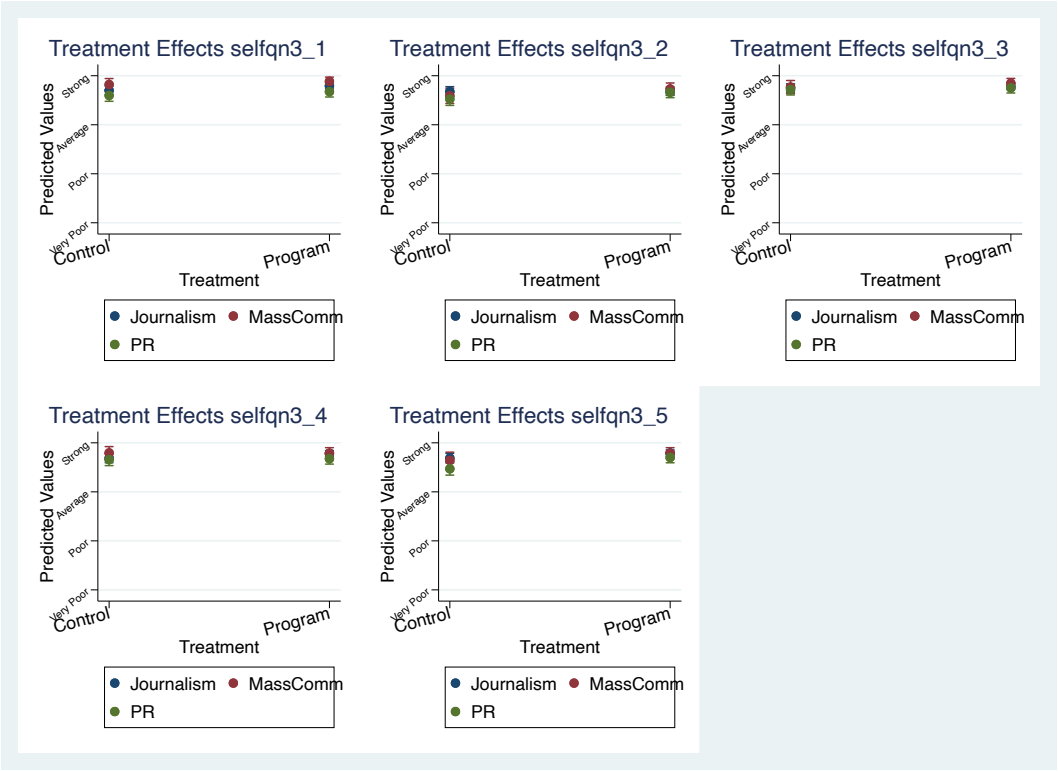

Figure 22: Journalism Ability Self Reported Strength Predicted Values

	(1) Qualified Investigative Journalism b/se	(2) My Skill v. Most b/se	(3) Can Mobilize Community b/se	(4) Can Identify Fake News b/se
Program	-0.12	-0.00	0.03	0.11
	(0.091)	(0.056)	(0.059)	(0.070)
MassComm	-0.25*	-0.00	-0.00	0.04
	(0.149)	(0.105)	(0.087)	(0.105)
PR	0.01	-0.09	-0.04	-0.10
	(0.112)	(0.076)	(0.075)	(0.100)
Program × MassComm	0.18	-0.09	0.02	-0.04
	(0.192)	(0.138)	(0.114)	(0.127)
Program × PR	0.08	-0.05	0.07	0.14
	(0.145)	(0.107)	(0.094)	(0.118)
Constant	2.35***	2.75***	2.72***	2.60***
	(0.072)	(0.045)	(0.048)	(0.060)
Observations	494	506	508	507

* p¡0.10, ** p¡0.05, *** p¡0.01

Table 23: Journalism Efficacy Regression Results

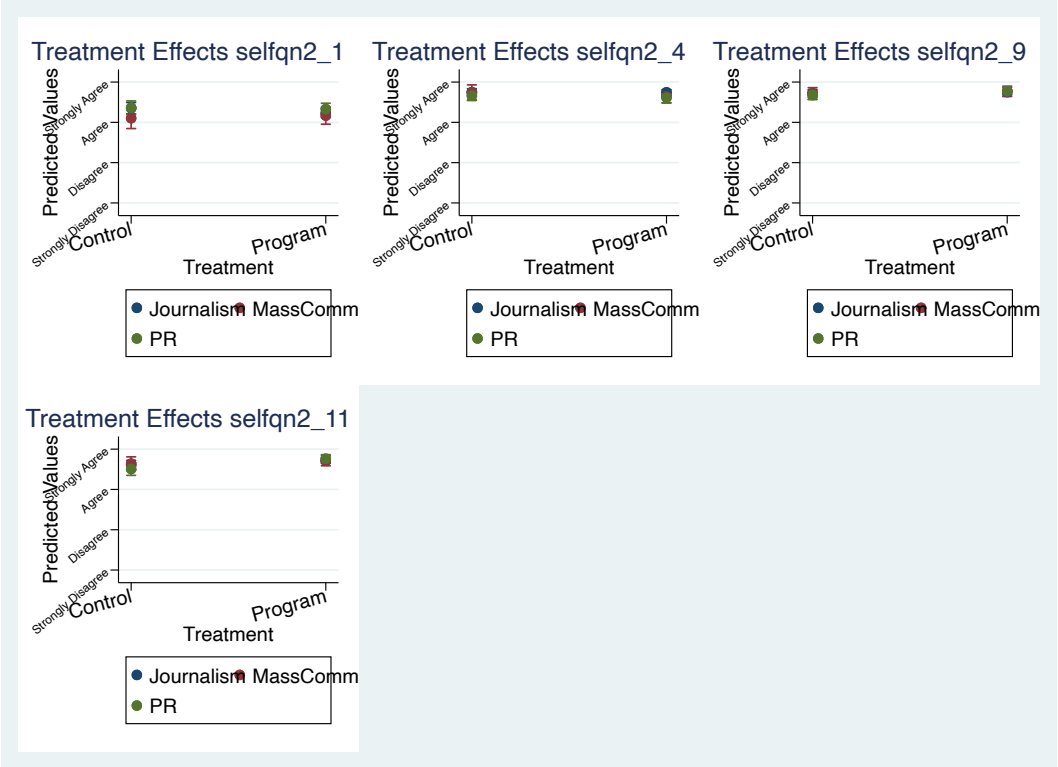

Figure 23: Journalism Efficacy Predicted Values

9.3.6 Topical Interest for Journalism

	(1) Rural b/se	(2) Youth b/se	(3) Women b/se	(4) Sports b/se	(5) Politics b/se	(6) Economy b/se	(7) Entertainment b/se
main							
Program	0.26	0.04	0.55**	0.06	-0.06	-0.11	-0.68**
	(0.255)	(0.295)	(0.263)	(0.318)	(0.364)	(0.469)	(0.288)
MassComm	-0.01	-0.52	-0.05	0.04	0.56	0.88	-0.24
	(0.380)	(0.409)	(0.382)	(0.473)	(0.478)	(0.558)	(0.417)
PR	-0.50	-0.49	-0.27	0.73**	0.75*	0.75	-0.57
	(0.324)	(0.347)	(0.318)	(0.363)	(0.399)	(0.495)	(0.364)
Program × MassComm	0.18	0.48	-0.32	-0.14	0.45	-0.61	-0.25
	(0.498)	(0.549)	(0.502)	(0.618)	(0.606)	(0.785)	(0.612)
Program × PR	1.19***	0.32	0.35	-0.86*	-1.12*	-0.95	0.21
	(0.436)	(0.463)	(0.433)	(0.499)	(0.589)	(0.736)	(0.517)
Constant	-0.04	1.10***	0.21	-1.40***	-1.77***	-2.40***	-0.69***
	(0.204)	(0.236)	(0.205)	(0.256)	(0.289)	(0.370)	(0.217)
Observations	508	508	508	508	508	508	508

* p¡0.10, ** p¡0.05, *** p¡0.01

Table 24: Topical Interest Logistic Regression Results

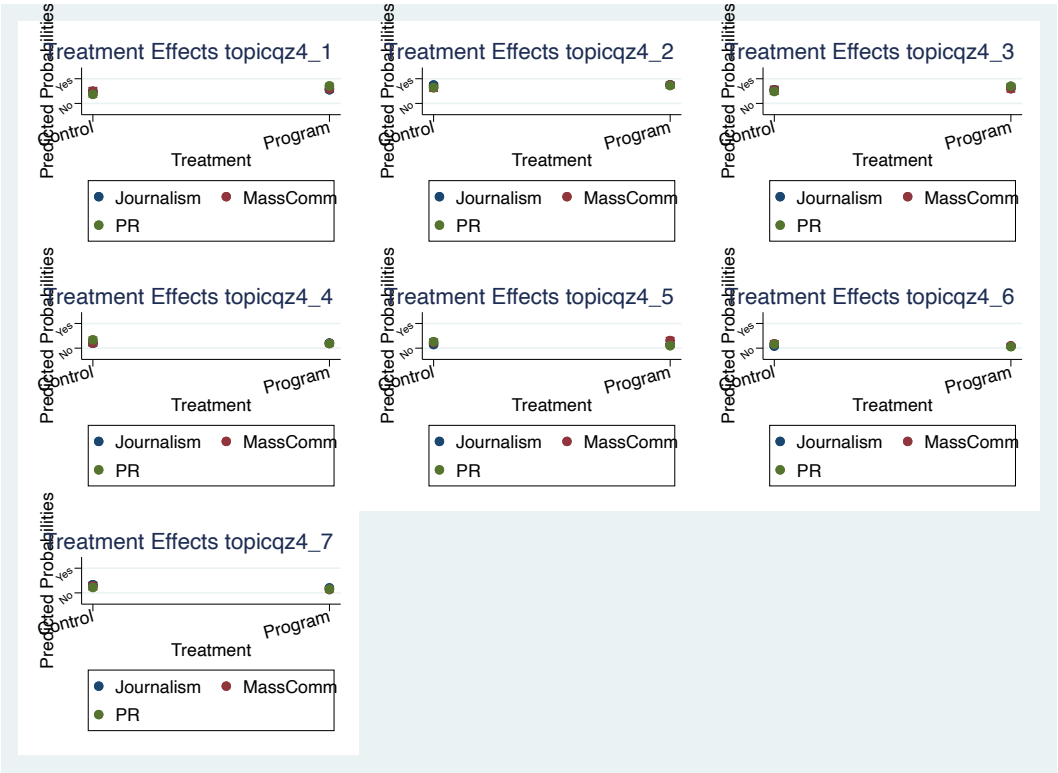

Figure 24: Topical Interest Logistic Predicted Values

9.3.7 Willingness to Participate in Contest to Produce Short Radio Segments

	(1) Participate Contest b/se
Program	0.01
	(0.037)
MassComm	0.00
	(0.060)
PR	-0.01
	(0.047)
Program × MassComm	0.04
	(0.063)
Program × PR	-0.02
	(0.063)
Constant	1.95***
	(0.031)
Observations	508

* p¡0.10, ** p¡0.05, *** p¡0.01

Table 25: Participate in Contest Regression Results

Figure 25: Participate in Contest Predicted Values

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