

Pre-Analysis Plan:

Can journalists be empowered through training and resources to counter misinformation?

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1 Introduction

In the midst of the COVID-19 pandemic and increasingly polarized politics, misinformation—including deliberately deceptive disinformation—has become widespread. This has been especially true of the Global South, where journalistic standards and fact-checking institutions are often comparatively less developed. The rise of misinformation has largely been fueled by social media, which has become a central source of information for many citizens in such contexts.

Bolivia—the context of this study—has been particularly subjected to increasing misinformation, fueled by its political turmoil and the COVID-19 pandemic. In response to allegations of electoral fraud during the 2019 presidential election, which was followed by generalized protest and violence, the incumbent president Morales resigned and fled the country. The interim government was severely criticized for its handling of pro-Morales protests and the COVID-19 crisis. Misinformation thrived in

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this context of generalized confusion.

In principle, journalists—the key producers of credible content—could play a central role in countering the dissemination of misinformation. However, journalists in low- and middle-income countries often lack training to detect and fact-check likely misinformation, the time to extensively corroborate source content, or the capacity or incentive to produce appealing articles to debunk it or compete against it. Given shrinking newsrooms, journalists have often amplified the dissemination of misinformation around COVID-19 and politics by reproducing viral news without fact-checking it, whether wittingly or unwittingly.

To evaluate the extent to which providing training on misinformation and resources to journalists can overcome these challenges, Internews conducted a randomized intervention among journalists in Bolivia. Out of a pool of approximately 350 applicants, 145 journalists were screened as eligible to participate in the program. Out of those, 73 “treated” journalists were randomly selected to receive an invitation to participate in the program, while 72 “control” were not invited. As explained in detail in Section 3, the intervention provided treated local journalists with: (i) training to identify misinformation and engage in fact-checking, so that they could produce stories that can combat and outcompete misinformation; (ii) seed funding to produce an original investigative journalistic content relating to misinformation; (iii) information about trending likely misinformation, as well as fact-checks recently conducted by local fact-checkers, to help journalists identify relevant topics for their regular work; and (iv) online materials advising on how to communicate fact-checks. Ultimately, the goal was to assess whether this bundle of interventions could reduce the production and social media sharing of misinformation and increase the production and sharing of content that corrects misinformation. The majority of journalists were engaged with the program throughout. Of the 73 journalists invited to participate in the program, 63 (86%) attended the training, which took place between June and July 2020, and 44 (60%) produced an investigative journalistic piece around misinformation, which were generally published in November and December 2020.

To evaluate the effectiveness of Internews’ intervention, we will consider a series of outcomes. First, we will examine differences in knowledge and behavior between treated and control journalists about how to identify misinformation, engage in fact-checking, and produce and share content to outcompete

misinformation. Moreover, we will assess differences using outcomes that measure whether journalists report producing and sharing journalistic content to outcompete misinformation. To that end, we conducted a survey between March and April 2021—roughly a year after the training concluded.

Second, we will look at differences in the characteristics and popularity of the content actually produced and shared by treated and control journalists, which complement the self-reported outcomes from the survey. To that end, we have scraped all publicly available content produced and shared online and on social media by treated and control journalists. We will use machine learning techniques to assess the extent to which the content produced and shared by treated journalists is of high quality in terms of informational content and style, whether it resembles misinformation, and whether it seeks to combat misinformation. Moreover, we will analyze differences in the popularity of content produced and shared by treated and journalists on social media, based on content shares and reactions on Facebook and Twitter. Measuring such popularity is important because the content that tries to debunk misinformation may not be as popular as the information that journalists are trying to debunk.

Third, we will also assess citizen reactions to the content produced by the journalists that were and were not part of the program. We conducted a survey of Bolivian citizens between December 2020 and March 2021, which included a second randomized evaluation that showed respondents titles and articles produced by treated and control journalists on the topics of health and politics and elicited their perceptions about those titles and articles.

Finally, it is important to clarify the timeline of the registration of this pre-analysis plan. Due to many parallel projects, this document was conceived significantly after we concluded the intervention and collected most of the data. In between, we only used part of the data to provide descriptive statics to the donor. However, these were uninformative regarding which outcome indexes to build and specifications to run. Importantly, none of the specifications pre-specified in this have been run before posting this pre-analysis plan.

1.1 Literature review

Misinformation correction within survey experiments in the Global North and, to a lesser extent, Global South has been largely shown to be effective in the immediate run but not in the longer one (Chan et al.,

2017; Nyhan, 2021; Walter et al., 2020). Corrections sometimes fail to reduce misperceptions among groups whose attitudes are challenged (Chan et al., 2017; Walter et al., 2020),¹ and in some instances even increase misperceptions among the group in question (Flynn, Nyhan and Reifler, 2017; Nyhan and Reifler, 2010; Pluviano, Watt and Della Sala, 2017). However, this backfiring effect or backlash is not a robust finding (Guess and Coppock, 2020; Wood and Porter, 2019). Corrective information has been found to be effective at increasing belief accuracy when received by respondents in the short run, especially when it originates from credible sources (Bowles, Larreguy and Liu, 2020; Cone, Flaharty and Ferguson, 2019; van der Meer and Jin, 2020; Vraga and Bode, 2017; Walter and Tukachinsky, 2020) or ideologically sympathetic sources (Berinsky, 2015), provides factual elaboration rather than simple rebuttal (Chan et al., 2017; van der Meer and Jin, 2020), replaces the misinformation by an alternate causal explanation Cook, Ullrich and Lewandowsky (2015); Lewandowsky et al. (2012); Nyhan and Reifler (2015); Ecker, Lewandowsky and Tang (2010), and is repeated (Cook, Ullrich and Lewandowsky, 2015; Lewandowsky et al., 2012).² However, the accuracy-increasing effects of corrective information like fact-checks often do not last or accumulate, and significant misperceptions are stable and persistent over time Chan et al. (2017); Flynn, Nyhan and Reifler (2017); Nyhan (2021).

Inoculation theory suggests that preemptively warning people about misinformation or misinformation tactics and refuting specific arguments or prebunking can create resistance against misinformation (Cook, 2013; van der Linden et al., 2017). Cook, Ullrich and Lewandowsky (2015) argue that the effect of misinformation can be mitigated if people are explicitly warned about possibly being misinformed. Karanian et al. (2020) show functional magnetic resonance imaging (fMRI) evidence that providing individuals with a simple warning about the threat of misinformation significantly reduces the effectiveness of misinformation. Relatedly, Lewandowsky et al. (2012) argues that a healthy sense of skepticism and distrust can reduce susceptibility to misinformation. In turn, Cook, Lewandowsky and Ullrich (2017) show that inoculating messages that explain the flawed argumentation technique used in the misinformation are effective in neutralizing those adverse effects of misinformation. Basol, Roozenbeek and van der Linden (2020), Roozenbeek and van der Linden (2019) and Roozenbeek, van der Linden and

¹This is in line with literature on political motivated reasoning (Lodge and Taber, 2000; Redlawsk, 2002; Taber and Lodge, 2006; Taber, Cann and Kucsova, 2009; Van Bavel and Pereira, 2018).

²Analogously, repeated misinformation is harder to correct Pennycook, Cannon and Rand (2018).

Nygren (2020) that teaching participants about common misinformation techniques through a game improves their capacity and confidence to spot misinformation techniques and misinformation, and their ability to resist misinformation across various contexts. Maertens et al. (2021) found significant decay of these effects over a 2-month period in the absence of repeated assessment of participants' abilities.³ Similarly, Banas and Rains (2010)'s meta-analysis on inoculation theory indicates that, while inoculation treatments often provide resistance to counter-attitudinal attacks that are immediate and with moderate delays, there is significant decay in resistance after two weeks.

A global deficit in digital media literacy has been identified as a critical factor explaining widespread belief in online misinformation. The evidence of the effectiveness of digital media literacy is mixed. Guess et al. (2020) show that an in-person intervention has no effects among largely rural respondents in India, who are those with lower media literacy. However, they show that the intervention increases the ability to detect false news in the United States and among those in an online sample of highly educated Indians, although the effect are not sustained for the former. Consistently, Badrinathan (2021) shows no effect of an hour-long in-person media literacy training, including inoculation strategies, corrections, and the importance of verifying misinformation, on respondents' ability to identify misinformation. Closest to our intervention, Hameleers (2022) explores the effect of the combination of digital media literacy and fact-checks and shows that it is most effective in lowering the perceived accuracy of misinformation. In contrast, Vraga, Bode and Tully (2022) show that news literacy messages do not enhance the effect of misinformation corrections.

Reducing the prevalence of false information thus requires increasing citizens' exposure to high-quality information and the rapid debunking of salient false claims. Although journalists are in a prime position to promote these goals, work assessing the effect of journalist training to detect and withstand malign misinformation campaigns is lacking.

1.2 Outline

This document proceeds as follows. In Section 2, we describe the context of the project. In Sections 3 and 4, we respectively describe the intervention, and different data sources we use to assess its impact. In

³Such a decrease was absent at least after three months when there was repeated assessment of participants' abilities, which could be perceived as a treatment continuation.

Sections 5 we explain the estimation strategy we use to test our hypotheses, which we outline in Section 6.

2 Context

Like many countries in the Global South, Bolivia has been subjected to increasing misinformation. This has been fueled in particular by its turbulent political landscape and the COVID-19 pandemic. The first round of the presidential election took place on October 20, 2019. The release of preliminary results was suddenly stopped at 7:40 pm, when 83.8% of the votes had been counted. At the time, the incumbent president Evo Morales led with 45.3% of the votes, over his primary opponent, Carlos Mesa, who had 38.2% of the votes. As a result, Morales was being unable to secure more than 50% of the votes or a 10 percentage point lead over his primary opponent to avoid runoff elections. By October 21, with 95.3% of the votes counted, the results showed Morales leading Mesa by well over 10 percentage points, and thus avoiding a runoff election.

In response, the opposition—as well as some foreign governments and international observers—called for an audit of the results by the Organization of American States (OAS), to which Morales agreed. The OAS audit report released on November 10 concluded that there was sufficient evidence of election fraud to warrant a new presidential election. More specifically, the report argued that it was statistically unlikely that Morales had secured a 10 percentage point lead over Mesa.

Together with the escalation of the protest and violence that followed the release of the controversial election results, and the request of several traditionally pro-Morales organizations and the military for Morales to resign, Morales resigned to “help restore peace and stability” and fled the country. Jeanine Áñez, who was the second Vice president of the Senate and the highest-ranking official remaining in the line of succession after a series of resignations, became the president of an interim government. Protests emerged in support of Morales and against the new government.

Months of political turmoil follow. The interim government was severely criticised for its handling of the protests. In particular, Áñez signed a decree granting total impunity to the armed forces to quell protesters, which resulted in a large number of people being killed. The interim government was also accused of severely mismanaging the COVID-19 crisis, including corruption in the procurement of ven-

tilators for the treatment of COVID-19. Moreover, the new presidential election was postponed due to the COVID-19 pandemic.

In this context, misinformation about politics and health proliferated. In particular, there were several fake news stories surrounding the campaign ahead of the 2020 elections. There were also instances of fake news relating to polls distributed over social media. For example, a Facebook post claimed that a poll over WhatsApp indicated that there was a 69% vote intention for Luis F. Camacho, who ultimately received 14% of the votes.⁴ There was also misinformation targeted to taint certain candidates. For example, an image circulated on Facebook showing a screen shot of a TV news show indicating that Luis Arce was booed by a crowd when starting his electoral campaign.⁵

Elections were finally held on October 18, 2020. Morales' party, the Movement for Socialism (MAS), won by a landslide, leading Luis Arce to the presidency without the need of a runoff election and securing majorities in both chambers. The calming of the political situation, however, did not limit the misinformation surrounding social networks.

3 Intervention

In May 2020, Internews and its Bolivian local partners disseminated an invitation to participate in a training program relating to misinformation. Journalists working in various forms of media were encouraged to submit applications, which included a baseline survey logging the outlets that they work at among other relevant background variables. Ultimately, approximately 350 individuals applied. Having identified 145 journalists that were a good fit for the program, 73 “treated” journalists were randomly selected to receive an invitation to participate in the program, while 72 “control” journalists would serve as a comparison group that would not receive any part of the training. For the 127 journalists who were the only representative from their media outlet, the randomization was conducted at the individual level; for the remaining journalists, treatment was assigned at the level of their 8 media outlets.

Internews' journalist misinformation training program consisted of three core elements: three train-

⁴The fact-checker Bolivia Verifica published a fact-check indicating that the news was fake. For more details see <https://boliviaverifica.bo/encuesta-falsa-pone-en-primer-lugar-a-luis-fernando-camacho-con-el-69/>.

⁵The fact-checker Chequea Bolivia published a fact-check showing that the news was fake. For more details see <https://www.chequeabolivia.bo/unitel-arce-fue-abucheador-en-inicio-de-campana>.

ing workshops and funding to write an article about misinformation; the dissemination of reports about trending misinformation; and videos and infographics advising journalists on how to write articles and fact-checks in a compelling and accurate way. We next describe each element of this bundled treatment.

3.1 Misinformation workshops and seed funding

Participating journalists first took part in three workshops on misinformation over the course of three weeks. The workshops were led by Internews and Maldita.es, a recognized fact-checker in Spain, over Zoom (due to COVID-19 precautions). To maximize attendance and the interaction between the workshop instructor and participants, journalists were split into two different groups: the first group attended workshops on Saturday mornings, and the second on Thursday nights. Each workshop lasted two hours, and thus each treated journalist could receive up to 6 hours of training on misinformation.

Each workshop focused on different issues relating to misinformation. The first workshop covered basic concepts relating to misinformation, how it disseminates over social media, and how different organizations work to fight against it. To reinforce learning, attendees had to identify examples of misinformation related content as part of their first homework assignment. The second workshop briefly reviewed the content imparted during the first workshop before turning to methodologies and tools to fact-check potential misinformation, including advanced text and reverse-image searching, photo forensics, metadata checking, geo-localization checking with tools such as Google Maps, among other techniques. These techniques were then reinforced through the test for the second homework assignment. The final workshop included several applications of the second workshop's tools and an overview of best practices to produce and publish fact-checks. As part of their last assignment, journalists were asked to employ these newly learned practices and guidelines to produce and publish content around misinformation. Subject to project proposal approval, treated journalists were provided approximately with 200 USD in seed funding to facilitate writing this article.

Though different reminders and messages were sent to the 73 journalists that were invited to participate in the training, 63 (86%) ultimately attended at least one workshop and the average journalist attended 2.5 of the 3 workshops. Of these journalists, 53 (72% of all journalists) completed and submitted the three post-training assignments previously mentioned. Since completion of assignments was

a key criteria for eligibility to Internews' fellowship support fund, only this set of trainees were eligible for seed funding. However, several trainees were not interested in the seed fund. This resulted in 49 proposals being submitted to conduct projects as part of the program. After revision of proposals, three required a second revision. At the end, a total of 46 proposals were approved and 44 were executed and delivered by the journalists.

3.2 Virality and misinformation reports

To increase the effectiveness of the training by providing source material to motivate potential topics for journalists to address, a daily distribution of virality reports was implemented between the end of September and mid December. These reports informed treated journalists about the most viral news of the day—defined by the articles with the greatest social engagement on Facebook, according to Crowdtangle.

Journalists also received weekly misinformation reports covering the most popular fact-checks of the week. Specifically, the weekly fact-checks from the two main Bolivian fact-checking organizations—Chequea Bolivia and Bolivia Verifica—were examined, and again Crowdtangle was used to identify the ten most viral fact-checks on Facebook.

3.3 Infographics and video on how to write a fact-check

Alongside the virality and misinformation reports, two other types of products were produced and distributed as part of the program in November 2021: four videos and ten infographics. The objective was to reinforce the content of the training conveyed during the workshops. The content of the videos was particularly targeted toward journalists, and focused on how to write and communicate fact-checks to successfully counter misinformation. The content of infographics was targeted to a larger audience and covered a range of topics related to misinformation.

4 Data

The outcome data uses several different sources of information to assess the impact of the training: a) responses to surveys that evaluate journalists' knowledge of different aspects of misinformation and techniques to combat it, b) public social media posts (including articles or shared fact-checks) made by journalists in their social media profiles, and c) online articles published by journalists.

4.1 Journalist survey data

Journalists had to complete three surveys,⁶ which included several measures of knowledge of misinformation, including: 1) ability to detect misinformation, 2) knowledge of verification techniques and existing fact-checking initiatives 3) knowledge of how to write a fact-check and disseminate it. These surveys were administered through Qualtrics prior to receiving training, after completing the training, and 6 months after the training.

We measure knowledge using an inverse covariate weighted (ICW) index of responses to different questions that ask about how to detect misinformation, specific ways of fact-checking, and knowledge of fact-checking initiatives. All ICW indexes used as outcomes will be normalized with respect to the control group, while all ICW indexes used as moderator variables will be normalized at the sample level. We also measure self-reported behavior using an ICW index that combines responses on the number of sources they use in their journalistic activities, their reliance on social media as a source of information, and how often they share and verify news that they receive on social media. Tables 16 to 22 provide all the questions that were asked in the Survey.

4.2 Social media posts

We extract information about the behavior of journalists on both their Facebook and Twitter accounts. The goal is to examine how journalists share both their own content and the content of others. We scraped all daily posts by journalists on their personal accounts. We used different Application Programming Interfaces (APIs) to scrape social media content: CrowdTangle for Facebook and the Twitter Developer

⁶We conducted a baseline, a midline, and an edline survey. Given significant attrition at midline, we will not use this survey.

API for Twitter. For Facebook, we scraped information for two types of users. First, some journalists use their personal Facebook accounts to publish and share journalistic content. Second, other journalists publish and share journalistic content through a business Facebook page of the specific journalist (not the newspaper that they work for).

We compute several metrics around the social media posts to capture behavior that is indicative of journalists not contributing to spread misinformation or helping to counter it. In particular, we track the number of places and people mentioned in the social media post and whether each social media post includes a link, a link to a newspaper, a link to a newspaper where the journalist works, or an image. We use ICW indexes to combine these count measures of their online behavior. That is, for each variable, we compute the number of social media posts that fit a criterion, and then we aggregate all variables through an ICW index.

4.3 Journal articles

To ascertain how the program affected the type of content produced by participants, we collect as much published content as possible from the outlets that treated and control journalists worked for. We scraped 79 Bolivian media outlets, which we identify as relevant during the call for journalists to participate in the interventions, and by the end we also had 79 outlets after detecting relevant new media outlets and discarding irrelevant media outlets in the journalist follow-up survey and the articles submitted by the journalist as part of the program.

To evaluate the quality of the articles produce by journalists, we compute several commonly-used metrics for each article. These metrics are designed to provide quantitative measures of four key features of articles: (i) the sentiment of an article, captured in an ICW sentiment index reflecting the degree to which positive and negative sentiments are expressed in the article; (ii) the lexical structure of the text, captured by an ICW lexical index including functional word count, lexicon count, and sentence count variables; (iii) the readability of the article, captured by ICW indexes based on reading time and grade level required of the reader (Flesch reading ease, Fernandez-Huerta, Crawford score, and Gutierrez Polini score); and (iv) the richness of the text, captured by ICW indexes of diversity of vocabulary—including the Hapaxlegomenon hapax score (ratio of the number of words that occur only once in a text), type

token ratio (ratio of unique words), yule’s characteristic K score (measure of lexical repetition of words), and Shannon’s entropy (measure of how much uncertainty a language has).

We use machine learning techniques to compute two further measures of quality. The first classifies articles in terms of low and high quality, based on the article’s similarity to Wikipedia articles deemed to be of high informational value and reliability. The second predicts whether an article resembles misinformation, in that it shares characteristics of fake news. Each prediction complements the linguistic measures of quality previously described. For each characteristic, we compute the number of articles with the corresponding label.

We also obtain metrics of social engagement for the articles that are posted on Facebook and Twitter. Using CrowdTangle for engagement on Facebook and the Twitter Developer API for engagement on Twitter, we scraped the number of reactions, shares, and comments (whenever applicable) associated with each article and post. We computed an ICW index combining these indicators of engagement on social media to produce an overall social interactions index covering every article and post.

4.4 Citizen survey data

Using information from the survey conducted among Bolivian citizens, we compute an ICW index combining article quality perceptions—in terms of being more credible, informative, and interesting—and an ICW index aggregating interest in article titles before reading them.

4.5 Independent variables

The main independent variable is an indicator for treatment assignment ($treated = 1$). We also collected some individual level covariates for precision, including gender, age, and location.

5 Estimation

The unit of randomization is (a) the journalist, for those participants who don’t share their affiliation with other journalists in the sample (127 journalists), or (b) the media outlet, for those participants who have colleagues from the same outlet in the sample (18 journalists), thus in (a) we have 127 journalists

that can be assigned either to treatment and control and in (b) either all the participants who work at one of eight outlets are assigned to treatment or to control. A matched pair block randomization was used to minimize differences between treatment and control journalists, and treatment and control outlets, along a number of salient dimensions.⁷ The unit of observation aggregation is also the journalist, so we estimate effects using the following OLS regression specification:

$$Y_i = \alpha_b + \beta \mathbf{X}_i^{pre} + \tau T_i + \varepsilon_i, \quad (1)$$

where outcome Y_i for journalist i is an ICW index that combines different outcome measures, or an outcome that is a count of the number of articles with a particular label, and is regressed on the treatment indicator, randomization block fixed effects α_b , and a vector of variables $\mathbf{X}_i^{pre}$ that includes baseline outcomes (when available) and further baseline covariates selected by LASSO. We cluster the standard errors at the level of the assignment (i.e. the journalist or media outlet). A modified version of equation 1 can be estimated using a difference-in-difference strategy. However, we prefer to include the outcomes at baseline as controls to increase statistical power (McKenzie, 2012).

Because the training included a seed funding program to produce investigative journalistic pieces, we might have a mechanical effect when studying the effect of the training on article outcomes. Our baseline analysis excludes those articles from the computation of indexes. In a complementary analysis, we descriptively compare article outcomes between articles produced under the seed funding program and other articles produced by treated journalists.

To complement the analysis on the effects of the training program, we conducted a survey with Bolivian citizens to assess perceptions of quality and interest on the articles produced by the journalists in the experimental sample, as well as the attractiveness of titles. The hypotheses and empirical questions that use this citizen survey data will be estimated at the level of the article or title associated to an article. Since respondents read two articles and three titles and the order in which they read was randomized we

⁷In each case, we use block randomization based on predetermined covariates: each journalist or media outlet was first assigned to a block of size 4, and then split into blocks of size 2.

estimate effects using the following OLS regression specification,

$$Y_{jk} = \delta_j + \gamma_k + \alpha_{bk} + \beta seed_{jk} + \tau T_{jk} + \varepsilon_{jk}, \quad (2)$$

where outcome Y_{jk} is an ICW index for respondent j in the round k in which the article/title was shown, T_{jk} is the treatment indicator, $seed_{jk}$ is the seed funding indicator, γ_k are round fixed effects, δ_j are respondent fixed effects, and α_{bk} are journalist/media-outlet block randomization fixed effects. We will use two-way cluster standard errors at the journalist/media-outlet and respondent level.

6 Hypotheses

As mentioned above, we expect the intervention to positively affect several outcomes related to misinformation. In particular, we expect effects on five dimensions: a) knowledge, b) journalistic production, c) spread of misinformation, d) production and spreading of fact-checking, and e) reader's interest, both with their own work and in social media. We use the estimation strategy described above to test the hypotheses outlined in this section. For all directed hypotheses we will conduct one-sided t tests. The appendix describes exactly which variables will be used for each hypothesis.

A: Knowledge

We expect that individuals who receive training on tools and strategies to verify content will be more likely to discern misinformation and know specific ways to fact-check it:

Hypothesis 1: Treatment increases discernment of misinformation.

Hypothesis 1.1: Treatment increases capacity to discern of misinformation.

Hypothesis 1.2: Treatment increases perceived capacity to discern of misinformation.

Hypothesis 2: Treatment increases knowledge of fact-checking.

Hypothesis 2.1: Treatment increases knowledge of fact-checking techniques.

Hypothesis 2.2: Treatment increases perceived knowledge of fact-checking techniques.

Hypothesis 2.3: Treatment increases knowledge of fact-checking dissemination.

Hypothesis 2.4: Treatment increases perceived knowledge of fact-checking dissemination.

B: Journalistic production

We next expect the program to have increased the quality of journalistic content:

Hypothesis 3: Treatment increases the quality of journalistic content.

Hypothesis 3.1: Treatment increases the lexical quality of journalistic content.

Hypothesis 3.2: Treatment increases the use of high quality sources.

Hypothesis 3.3: Treatment reduces the level of misinformation reproduced in journalistic content.

Furthermore, we anticipate the following heterogeneous effects:

Hypothesis 3.a: The effect on quality is greater when journalists face fewer restrictions to decide what journalistic content they produce.

Hypothesis 3.b: The effect on quality is greater when journalists face fewer restrictions to decide what journalistic content they share.

Hypothesis 3.c: The effect on quality is greater when journalists believe their audience is interested.

Hypothesis 3.d: The effect on quality is greater when journalists have resources and time to produce journalistic content.

C: Sharing misinformation

We expect treated individuals to share online content of greater quality:

Hypothesis 4: Treatment increases the quality of content shared in social media.

Hypothesis 4.1: Treatment increases the quality of journalistic content shared in social media.

Hypothesis 4.2: Treatment increases journalists' reported sharing of high quality content online.

Hypothesis 4.3: Treatment reduces the amount of misinformation shared online.

Hypothesis 4.4: Treatment reduces the amount of content perceived as misinformation shared online.

Furthermore, we anticipate the following heterogeneous effects:

Hypothesis 4.a: The effect on the quality of the journalistic content posted is greater when journalists face fewer restrictions to decide what journalistic content they share.

Hypothesis 4.b: The effect on the quality of the journalistic content posted is greater when journalists believe their audience is interested.

D: Production and sharing of fact-checks

We anticipate the program to increase the production and sharing of fact-checks:

Hypothesis 5: Treatment increases the production and sharing of content that combats misinformation.

Hypothesis 5.1: Treatment increases the production of fact-checks and misinformation-related content.

Hypothesis 5.2: Treatment increases the self-reported production of content that combats misinformation.

Hypothesis 5.3: Treatment increases the amount of fact-checks shared online.

Hypothesis 5.4: Treatment increases the self-reported amount of fact-checks shared online.

Furthermore, we anticipate the following heterogeneous effects:

Hypothesis 5.a: The effect on production and sharing is greater when journalists face fewer restrictions to decide what journalistic content they produce.

Hypothesis 5.b: The effect on production and sharing is greater when journalists believe their audience is interested.

Hypothesis 5.c: The effect on production and sharing is greater when they face fewer restrictions to decide what journalistic content they share.

E: Reader's interest

Finally, we consider reader assessments of the content produced by journalists:

Hypothesis 6: Readers are more likely to judge articles produced by treated journalists, and especially articles produced with the seed funding, as higher quality.

Empirical questions

The preceding hypotheses involve clear directional expectations. However, treatment may also produce a variety of other effects that are harder to anticipate. We agnostically assess the following empirical

questions to help understand the intervention's impact:

Empirical Question 1: Treated journalists become more or less likely to report job changes

Empirical Question 2: Treated journalists become more or less likely to report having new social media accounts

Empirical Question 3: Treated journalists become more or less likely to experience social interactions with the content they produce

Empirical Question 4: Treated journalists become more or less likely to experience social interactions with the content they post

Empirical Question 5: Treated journalists become more or less likely to produce more journalistic content

Empirical Question 6: Treated journalists become more or less likely to claim to produce more journalistic content

Empirical Question 7: Treated journalists become more or less likely to spend more time producing journalistic content

Empirical Question 8: Treated journalists become more or less likely to post things on social media

Empirical Question 9: Treated journalists become more or less likely to spend more time post things on social media

Empirical Question 10: Readers are more or less likely to be attracted by titles of articles produced by treated journalist

Empirical Question 11: Readers are more or less likely to share articles produced by treated journalist by just reading the titles

Empirical Question 12: Readers are more or less likely to be attracted by articles produced by treated journalist

Empirical Question 13: Readers are more or less likely to share articles produced by treated journalist

7 Appendix

Table 1: **Hypothesis Table**

Hypothesis	Description	Moderator Variables	Data	Outcomes Variables
H1	Treatment increases discernment of misinformation		Survey Data	ICW Index using Q84, campañas_desinfo, Q81_5, conocimiento_desinfo
H1.1	Treatment increases capacity to discern misinformation		Survey Data	ICW index using Q84, campañas_desinfo
H1.2	Treatment increases perceived capacity to discern misinformation		Survey Data	ICW index using Q81_5, conocimiento_desinfo
H2	Treatment increases knowledge of fact-checking		Survey Data	ICW index using Q87, iniciativas_orgs_des, Q81_7, Q86, Q89, Q91, Q81_8, Q81_9, Q88, Q90
H2.1	Treatment increases knowledge of fact-checking techniques.		Survey Data	ICW index using Q87, iniciativas_orgs_des
H2.2	Treatment increases perceived knowledge of fact-checking techniques		Survey Data	ICW index using Q81_7, Q86
H2.3	Treatment increases knowledge of fact-checking dissemination.		Survey Data	ICW index using Q89, Q91
H2.4	Treatment increases perceived knowledge of fact-checking dissemination.		Survey Data	ICW index using Q81_8, Q81_9, Q88, Q90

H3	Treatment increases the quality of journalistic content.	-	Newspaper and Social Media Data: Outcomes in content and activity	ICW index using quality_prediction, sentiment, source_entities; source_urls; lexical_index_length, lexical_index_factual, readability_index, richness_index, Q77, Q101, prediction_fakenews_articles
H3.a	The effect on quality is greater when journalists face fewer restrictions to decide what journalistic content they produce.	Measure of restrictions to decide what journalistic content they produce	Newspaper and Social Media Data: Outcomes in content and activity	.
H3.b	The effect on quality is greater when journalists face fewer restrictions to decide what journalistic content they share	Measures of restrictions to decide what journalistic content they share		.
H3.c	The effect on quality is greater when journalists believe their audience is interested.	Measures of audience interest	Corresponding Data	.
H3.d	The effect on quality is greater when when journalists have resources and time to produce journalistic content	Measure of lack of resources and/or time to produce journalistic content.		.

Table 2: **Hypothesis-continued**

H3.1	Treatment increases the lexical quality of journalistic content.	-	Newspaper and Social Media Data: Outcomes in content and activity	ICW index using quality_prediction, sentiment, source_entities; source_urls; lexical_index_length, lexical_index_factual, readability_index, richness_index
H3.2	Treatment increases the use of high quality sources.		Survey Data	ICW index using Q77, Q101
H3.3	Treatment reduces the level of misinformation reproduced in journalistic content.		Newspaper and Social Media Data: Outcomes in content and activity	prediction_fakenews_articles
H4	Treatment increases the quality of content shared in social media.		Social Media Data	ICW index using share_quality_content, quality_prediction, link_websites, link_articles, working_newspaper, number_words, only_image, sentiment, source_entities, Q100, share_fakenews, fake_prediction_post, prediction_fakenews_articles, Q85
H4.a	The effect on the quality of the journalistic content posted is greater when journalists face fewer restrictions to decide what journalistic content they share.	Measures of restrictions to decide what journalistic content they share		.

Table 3: **Hypothesis-continued**

H.4.b	The effect on the quality of the journalistic content posted is greater when journalists believe their audience is interested.	Measures of audience interest		.
H4.1	Treatment increases the quality of journalistic content shared in social media.		Social Media Data	ICW index using <i>share_quality_content</i> , <i>quality_prediction</i> , <i>link_websites</i> , <i>link_articles</i> , <i>working_newspaper</i> , <i>number_words</i> , <i>only_image</i> , <i>sentiment</i> , <i>source_entities</i>
H4.2	Treatment increases journalists' reported sharing of high quality content online.		Survey Data	Q100
H4.3	Treatment reduces the amount of misinformation shared online.		Social Media Data	ICW index using <i>share_fakenews</i> , <i>fake_prediction_post</i> , <i>prediction_fakenews_articles</i>
H4.4	Treatment reduces the amount of content perceived as misinformation shared online.		Survey Data	Q85
H5	Treatment increases the combating of misinformation in content produced and shared.		Newspaper Data	ICW index using <i>factchecking</i> , <i>faknews_topics</i> , <i>factchecking</i> , <i>faknews_topics</i> , <i>freq_comb_desinfo</i> , <i>didicil_desinfo</i> , <i>link_to_factcheck</i> , Q78, Q79, Q82

Table 4: **Hypothesis-continued**

H5.a	The effect on production and sharing is greater when journalists face fewer restrictions to decide what journalistic content they produce.	Measure of restrictions to decide what journalistic content they produce		.
H5.b	The effect on production and sharing is greater when journalists believe their audience is interested.	Measures of audience interest	Newspaper Data	.
H5.c	The effect on production and sharing is greater when journalists face fewer restrictions to decide what journalistic content they share.	Measures of restrictions to decide what journalistic content they share		.
H5.1	Treatment increases the production of fact-checks and misinformation-related content.		Newspaper Data	ICW index using factchecking, faknews_topics
H5.2	Treatment increases the self-reported production of content that combats misinformation.		Survey Data	ICW index using freq_comb_desinfo, didicil_desinfo
H5.3	Treatment increases the amount of fact-checks shared online.		Social Media Data	link_to_factcheck
H5.4	Treatment increases the self-reported amount of fact-checks shared online.		Social Media Data	ICW index using Q78, Q79, Q82

Table 5: **Hypothesis-continued**

H6	Readers are more likely to judge articles produced by treated journalist under the seed funding as higher quality		Individual Survey data	ICW index using credibilidad, informative
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Table 6: **Hypothesis-continued**

Table 7: **Empirical Questions**

Empirical Question	Description	Data	Outcomes Variables
E1	Treated journalists are more or less likely to report job changes	Survey Data	indexes of job loss/gain: ICW index using Q64, cambio_medios, medios_cambios_dejo, medios_cambios_empez
E2	Treated journalists are more or less likely to report having new social media accounts	Survey Data	ICW index using Q67, cuenta_nueva_FB, Facebook, nueva_cuenta_twitter, Twitter interactions_index
E3	Treated journalists are more or less likely to experience social interactions with the content they produce	Production Content	
E4	Treated journalists are more or less likely to experience social interactions with the content they post	Social Media Content	interactions_index_post
E5	Treated journalists are more or less likely to produce more journalistic content	Production Activity	ICW index using no_articles, no_articles_no_beca
E6	Treated journalists are more or less likely to claim to produce more journalistic content	Survey Data	ICW index using published_contents_s
E7	Treated journalists are more or less likely to spend more time producing journalistic content	Survey Data	ICW index using Q98_1, Q98_2, Q98_3, Q98_4, Q98_5
E8	Treated journalists might more or less likely to post things on social media	Social Media Activity	ICW index using no_posts, no_posts_no_beca
E9	Treated journalists are more or less likely to spend more time post things on social media	Survey Data	Q98_6
E10	Readers are more or less likely to be attracted by titles of articles produced by treated journalist	Individual Survey data	lea_titulos
E11	Readers are more or less likely to share articles produced by treated journalist by just reading the titles	Individual Survey data	share_titulos
E12	Readers are more or less likely to be attracted by articles produced by treated journalist	Individual Survey data	interesting
E13	Readers are more or less likely to share articles produced by treated journalist	Individual Survey data	share

Table 8: **Name of Variables**

Type of Variable	Name of Variable	Description
outcome	quality_prediction	prediction of quality in text of article.
outcome	prediction_fakenews_articles	prediction of misinformation in text of article
outcome	sentiment	prediction of positive and negative emotions in text
outcome/ input	source_entities	count of organization and person entities in text.
for lexical		
outcome/ input	source_urls	whether article mention at least one URL in text
for lexical		
outcome	lexical_index_factual	index of feat_propPER, feat_propLOC, feat_propORG, functional_words
outcome	lexical_index_length	index of sentence_count, lexicon_count, source_entitites, source_urls
outcome	readability_index	index that capture diversity of vocabulary (hapazlegomenon, type token ratio, yule's characteristic,shannon's entropy.)
outcome	factchecking	measure that predicts if content is a factcheck
outcome	richness_index	Index that captures how complex the text is (fleschreading ease, fernandez huerta score, reading time, crawford and gutierrez polini score
outcome	topic	whether topic of article is: culture, misinformation, economy, politics, health, society
outcome/input to index	words_body_clean	number of words in article
input to index	feat_propPER	proportion of person features in text of article, input for lexical_index
input to index	feat_countPER	number of person features in text of article
input to index	feat_propLOC	proportion of location features in text of article, input for lexical_index
input to index	feat_countLOC	number of location features in text of article
input to index	feat_propORG	proportion of organization features in text of article, input for lexical_index
input to index	feat_countORG	number of organization features in text of article
input to index	functional_words	count of functional words (words that have little lexical meaning or have ambiguous meaning and express grammatical relationships among other words within a sentence) per text. Input for lexical_index

input to index	lexicon_count	number of words present in the text. Input for lexical_index
input to index	sentence_count	sentence count per text, Input for lexical_index
input to index	hapaxlegomenon_R	V1: = number of hapax legomena (words that occurred only once) V: = number of unique words N: = number words in the same text Higher values of Honore's measure indicate greater vocabulary richness. Input for readability_index
input to index	hapaxlegomenon_hapax	ratio between the number of hapax legomena (words that occur only once, in a text and the number of words in the text. Input for readability_index
input to index	hapaxDisLegomena_S	ratio between the number of hapax dislegomena (words that occur only twice in a text) and the number of unique words in the text.
input to index	hapaxDisLegomena_h	ratio between the number of hapax dislegomena (words that occur only twice in a text) and the number of words in the text.
input to index	type_tokenratio	number of types divided by the number of tokens; the closer to 1 the greater the complexity. Input for readability_index
input to index	yules_characteristic_K	measure of lexical richness that takes into account the number of times words occur within a text defined by where M1 is the number of all word forms a text consists of and M2 is the sum of the products of each observed frequency to the power of two and the number of word types observed with that frequency. Input for readability_index
input to index	shannon_entropy	diversity index. Input for readability_index
input to index	flesch_reading_ease	input for richness_index
input to index	fernandez_huerta	input for richness_index
input to index	reading_time	estimated reading time need, input for richness_index
input to index	crawford	returns an estimate of the years of schooling required to understand the text. input for richness_index
input to index	gutierrez_polini	input for richness_index
outcome	no_articles	number of articles produced
outcome	no_articles_no_beca	number of articles produced excluding articles produced from fondo semilla

Table 9: Name of Variables-continued

outcome	interactions_index	ICW index that captures the engagement of the article in social media (likes, reactions and shares in Facebook and Twitter)
input to index	total_interactions_facebook	total of social interaction in facebook of article, input to interactions_index
input to index	total_interactions_twitter	total of social interaction in twitter of article, input to interactions_index
input to index	score_crowdtangle	over/under performing score of crowdtangle, input to interactions_index
input to index	num_users_facebook	number of users that shared the article in facebook, input to interactions_index
input to index	num_users_twitter	number of users that shared the article in twitter, input to interactions_index
outcome	number_words	number of words in post.
outcome	only_image	whether post has only an image
outcome	interactions_index_post	ICW index that captures engagement of post
outcome	fake_prediction_post	prediction of misinformation in social media post.
outcome	source_entities	counts of organization and person entities in post
outcome	faknews_topics	whether post content related or that mentions fake news, misinformation topics.
outcome	no_posts	number of of social media posts published in Facebook or Twitter
outcome	no_posts_no_beca	number of of social media posts published in Facebook or Twitter
outcome	link_websites	whether post shares or not a link of a website
outcome	link_articles	whether post shares a link to a newspaper article
outcome	working_newspaper	whether post shares a link to the newspaper where journalist works
outcome	link_to_factcheck	whether post shares a link or a post to a Bolivian fact-checker organization (Bolivia Verifica, Chequea Bolivia)
outcome	share_fakenews	prediction of misinformation in article shared in post.
outcome	share_quality_content	prediction of high quality in article shared in post.

Table 10: **Name of Variables-continued**

Table 11: **Mediator Variables-Index**

Mediator Variable	Input for index
Measure of restrictions to decide what journalistic content they produce	ICW index using Q71, Q72, Q73 , Q74_1, Q74_2, Q74_5, Q74_6, Q81_1, Q81_2, Q81_3, Q81_4, Q81_11, Q81_12
Measures of restrictions to decide what journalistic content they share	ICW index using Q76_1, Q76_2, Q76_6, Q76_7, Q83_1, Q83_2, Q83_3, Q83_4, Q83_5, Q83_7, Q83_8
Measures of audience interest - production	ICW index using Q74_4, Q81_10, Q81_11, Q92, Q94
Measures of audience interest - sharing	ICW index using Q74_4, Q76_4, Q76_5, Q83_6, Q92, Q94
Measure of lack of resources and/or time to produce journalistic content.	Q74_3
Measure of lack of resources and/or time to share journalistic content.	Q76_3

Table 12: **Citizen Survey-Questions and Variables**

Question ID	Question- Description	Notes
Q125	¿Cómo se enteró del estudio?	Do not include
Edad	¿Cuál es su edad?	Balance
Q9	¿En qué departamento vive?	Do not include
Q9	¿Cuál es su género?	Balance
Q10	¿Hasta qué grado de educación estudió?	Balance
Redes sociales y consumo de información		
Q12	¿Con qué frecuencia usa usted WhatsApp?	Balance
Q14	¿Con qué frecuencia usa usted redes sociales (ej., Facebook, Twitter, Instagram)?	Balance
Q15	¿Con qué frecuencia recibe noticias de estos diferentes tipos de fuentes?	Not a question
Q15_1	Radio / Televisión	Balance
Q15_2	Redes sociales (ej.,Facebook, Twitter,Instagram)	Balance
Q15_3	Periódicos impresos y en línea	Balance
Q15_4	WhatsApp	Balance
Q15_5	Conversaciones confamiliares y amigos	Balance
Q15_6	Otras página de internet	Balance
Q124	¿Qué tanto confía o desconfía de la información que recibe de estas fuentes?	Not a question
Q124_1	Radio / Televisión	Balance
Q124_2	Periódicos impresos y en línea	Balance
Q124_3	Otras página de internet	Balance

Q124_4	WhatsApp	Balance
Q124_5	Redes sociales (ej., Facebook, Twitter, Instagram)	Balance
Q124_6	Conversaciones familiares y amigos	Balance
Q16	De los siguientes temas, ¿cuáles son los que a usted las noticias le interesan más?	Balance
TITULOS		
lea_titulos	¿Qué tan probable es que usted lea el artículo asociado si leyera el siguiente título?	
share_titulos	¿Qué tan probable es que usted comparta vía WhatsApp o redes sociales (ej., Facebook, Twitter, Instagram) el artículo asociado con el siguiente título?	

Table 13: **Citizen Survey-Questions and Variables-continued**

Articulos		
credibilidad	¿Qué tan creíble le resultó la información que leyó en cada uno de los artículos?	
informative	¿Qué tan informativa le resultó la información que leyó en cada uno de los artículos?	
interesting	¿Qué tan interesante le resultó la información que leyó en cada uno de los artículos?	
share	¿Qué tan probable es que usted compartiría vía WhatsApp o redes sociales (ej. Facebook, Twitter, Instagram) alguno de estos artículos?	
Q104	Caso 1: Imagen que te llegó por WhatsApp con una captura de pantalla de la cuenta de Twitter de una persona conocida diciendo algo muy controversial.	Do not include
Q104_1	¿Qué tan probable es que la compartas sin antes verificarla?	Do not include
Q104_2	¿Qué tan probable es que creas que es falsa?	Do not include
Q106	Caso 2: Link a la noticia de un conocido periódico reportando evidencia seria de corrupción de un político con el que usted simpatiza. El periódico tiene conocida ideología política contraria a la del político.	Do not include
Q106_1	¿Qué tan probable es que la compartas sin antes verificarla?	Do not include
Q106_2	¿Qué tan probable es que creas que es falsa?	Do not include
Q107	Caso 3: Audio que le llegó por WhatsApp reportando evidencia de corrupción de un político del que usted ya sospechaba y usted no simpatizaba	Do not include
Q107_1	¿Qué tan probable es que la compartas sin antes verificarla?	Do not include
Q107_2	¿Qué tan probable es que creas que es falsa?	Do not include
Q101	¿Con qué frecuencia se detiene usted a analizar si una noticia es potencialmente falsa o no?	Balance

Table 14: Citizen Survey-Questions and Variables-continued

Q102	¿Qué tanto conocimiento tiene usted para identificar si una noticia es potencialmente falsa o no?	Balance
Q108	¿Cuáles son las principales características de una noticia que lo hacen dudar que puede ser falsa?	Balance
Q109	¿Cuáles son los principales medios por donde se diseminan las noticias falsas?	Balance
Q110	¿Con qué frecuencia usted verifica si una noticia que duda que puede ser falsa antes de compartirla?	Balance
Q111	¿Qué tanto conocimiento tiene usted para verificar si una noticia dudosa es falsa o no?	Balance
Q112	¿Cuáles son las principales formas para verificar una noticia?	Balance
Q113	Si quisiera verificar alguna información, ¿qué verificadores de hechos podría usar? Enumere todos los que conozca. Si no sabe lo que es un verificador, escriba "No sé que es" y si no conoce ningún verificador, escriba "Ninguno".	Balance
Q114	Si descubre que una noticia es falsa, ¿con qué frecuencia comparte el descubrimiento con otros en WhatsApp y redes sociales (ej., Facebook, Twitter, Instagram)?	Balance
Q115	¿Qué tan probable cree que la desinformación contribuye a los siguientes problemas en la sociedad Boliviana?	Not a question
Q115_1	Decisiones que pueden afectar la salud	Balance
Q115_2	Elección de candidatos que no representan los intereses de los ciudadanos	Balance
Q115_3	Desprestigiar o enaltecer personas falsamente	Balance
Q115_4	Polarización ideológica	Balance
Q115_5	Violencia hacia ciertas personas o grupos de la sociedad	Balance
Q115_6	Incrementar el odio hacia ciertas personas o grupos de la sociedad	Balance

Table 15: Citizen Survey-Questions and Variables-continued

Table 16: **Endline Journalists Survey-Questions and Variables**

Question ID	Question Description	Notes
new_mail_a	Desde mayo de 2020, ¿tiene un correo electrónico nuevo?	Not using
new_mail	Indique su nuevo correo electrónico	Not using
Nuevo_numero	Desde mayo de 2020, ¿tiene un número de WhatsApp nuevo?	Not using
Q64	Celular Indique su nuevo número de teléfono celular con cuenta de WhatsApp: A continuación, le vamos a hacer algunas preguntas sobre si, desde mayo de 2020, hubo algún cambio en los medios (incluyendo periódicos, blogs, etc.) en los que trabaja como periodista contribuyendo a la producción y publicación de contenido periodístico.	Not using
cambio_medios	Desde mayo de 2020, ¿hubo algún cambio en los medios (incluyendo blogs, etc.) para los que trabaja?	
medios_cambios_dejo	Indique los medios para los que, desde mayo de 2020, dejó de trabajar como periodista (incluyendo blogs, etc.).	
medios_cambios_empez	Indique los medios para los que, desde mayo de 2020, comenzó a trabajar como periodista (incluyendo blogs, etc.).	
Medios_Links	Indique el link para cada uno de los nuevos medios mencionados. Por ejemplo, https://elpais.com/ .	Not using
	Puesto Indique cuál es su puesto en cada uno de los medios mencionados.	Not using
Link_publicaciones	Indique links con ejemplos de las publicaciones a las que haya contribuido desde mayo de 2020 en cada uno de los medios mencionados.	Not using
Cantidad_Contenidos	Indique cuántos contenidos periodísticos contribuyó a producir, en promedio, por mes, desde mayo de 2020, en cada uno de los medios mencionados.	Not using
Q67	Ahora vamos a hacer algunas preguntas sobre si, desde mayo de 2020, tiene al menos una cuenta nueva de Facebook o Twitter donde publica los contenidos periodísticos tanto suyos como de otros.	

cuenta_nueva_FB	Desde mayo de 2020, ¿tiene al menos una cuenta de Facebook nueva?	
Facebook	Proporcione el link a sus cuentas nuevas de Facebook.	
nueva_cuenta_twitter	Desde mayo de 2020, ¿tiene al menos una cuenta de Twitter nueva?	
Twitter	Proporcione el link a sus nuevas cuentas de Twitter.	
Q96	Ahora le vamos a hacer algunas preguntas sobre el tiempo que dedicó, por semana, a su trabajo como periodista desde mayo de 2020.	Not using
Q97	Desde mayo de 2020, ¿cuántas horas trabajó en una semana típica contribuyendo a publicar contenidos periodísticos (tanto propios como de otros) en medios en línea y redes sociales?	Not using
Q98	De esas horas, aproximadamente, ¿qué porcentaje dedicó a las siguientes tareas?	Not using
Q98_1	Leyendo para identificar noticias (tanto para producir como para compartir contenido) :	
Q98_2	Investigando (incluyendo contactando y contrastando fuentes, leyendo sobre el tema, viajando, etc.)	
Q98_3	Escribiendo contenidos	
Q98_4	Editando contenidos (incluyendo el contenido de otros) :	
Q98_5	Publicando contenido en línea :	
Q98_6	Publicando contenido en redes sociales (tanto de contenido propio como de otros)	
Q98_7	Otras tareas :	Not using
Q69	Ahora le vamos a hacer algunas preguntas sobre los contenidos periodísticos en los que contribuyó a producir, publicar y compartir en medios en línea (ej., periódicos, blogs) y en las redes sociales (ej., Facebook y Twitter), desde mayo de 2020.	Not using
published_contents_s	Desde mayo de 2020, ¿contribuyó a publicar contenidos periodísticos en medios en línea y redes sociales?	
Q71	Desde mayo de 2020, ¿con qué frecuencia tuvo libertad para decidir sobre el tema de los contenidos periodísticos en los que contribuyó a publicar en medios en línea y redes sociales?	Measure of restrictions to decide what journalistic content they produce

Table 17: **Endline Journalists-Questions and Variables- continued**

Q72	Desde mayo de 2020, ¿con qué frecuencia participó en el proceso de redacción de los contenidos periodísticos en los que contribuyó a publicar en medios en línea y redes sociales?	Measure of restrictions to decide what journalistic content they produce
Q73	Desde mayo de 2020, ¿con qué frecuencia participó en el proceso de edición de los contenidos periodísticos en los que contribuyó a publicar en medios en línea y redes sociales?	Measure of restrictions to decide what journalistic content they produce
Q74	Q74 Desde mayo de 2020, ¿con qué frecuencia las siguientes razones fueron limitaciones importantes que afectaron los contenidos periodísticos en los que contribuyó a publicar en medios en línea y redes sociales?	Not a question
Q74_1	La línea editorial de los medios donde trabajo sobre que noticias cubrir y cómo	Measure of restrictions to decide what journalistic content they produce
Q74_2	Falta de conocimiento técnicos (ej., sobre el tema o herramientas de investigación periodística)	Measure of restrictions to decide what journalistic content they produce
Q74_3	En general, falta de tiempo o recursos	Measure of lack of resources and/or time to produce journalistic content.
Q74_4	Necesidad producir contenido que sea atractivo para la audiencia del medio	Measures of audience interest - production
Q74_5	Temor a posibles ataques por los contenidos periodísticos que contribuyo a producir	Measure of restrictions to decide what journalistic content they produce
Q74_6	Presiones políticas	Measure of restrictions to decide what journalistic content they produce
Q100	Desde mayo de 2020, ¿Compartió contenidos periodísticos en redes sociales?	
Q76	¿Con qué frecuencia las siguientes razones fueron limitaciones importantes que afectaron el contenido periodístico que compartió en redes sociales desde mayo de 2020?	Not a question
Q76_1	Temor al monitoreo en los medios donde trabajo	Measures of restrictions to decide what journalistic content they share
Q76_2	Falta de conocimiento técnico para evaluar la veracidad del contenido periodístico a compartir	Measures of restrictions to decide what journalistic content they share
Q76_3	En general, falta de tiempo o recursos	Measure of lack of resources and/or time to share journalistic content.

Table 18: **Endline Journalists-Questions and Variables- continued**

Q76_4	Falta de una audiencia en redes sociales con quien compartir el contenido periodístico	Measures of audience interest - sharing
Q76_5	Necesidad compartir contenido que sea atractivo para mi audiencia en redes sociales	Measures of audience interest - sharing
Q76_6	Temor a posibles ataques por los contenidos periodísticos que comparto	Measures of restrictions to decide what journalistic content they share
Q76_7	Presiones políticas	Measures of restrictions to decide what journalistic content they share
Q61	Ahora le vamos a hacer algunas preguntas sobre las fuentes en línea y redes sociales que usted usó como información desde mayo de 2020.	Not a question
Q101	Indique la frecuencia con la que usó los siguientes tipos de fuentes de información desde mayo de 2020.	
Q101_1	Radio / Televisión (1)	
Q101_2	WhatsApp	
Q101_3	Redes sociales (ej. Facebook, Twitter)	
Q101_4	Periódicos impresos y en línea	
Q101_5	Otras páginas de internet	
Q77	¿Qué tanta confianza o desconfianza le tiene a la información que recibe de las siguientes fuentes de información?	
Q77_1	Radio / Televisión (1)	
Q77_2	WhatsApp	
Q77_3	Redes sociales (ej. Facebook, Twitter)	
Q77_4	Periódicos impresos y en línea	
Q77_5	Otras páginas de internet	
freq_comb_desinfo	¿Con qué frecuencia usted contribuyó a publicar en medios en línea contenidos periodísticos que buscaban combatir la desinformación en Bolivia desde mayo de 2020?	
campanyas_desinfo	Indique casos de campañas de desinformación en Bolivia desde mayo de 2020.	
links_comb_desinfo	Indique los links a contenidos periodísticos en medios en línea que buscaban combatir la desinformación en Bolivia que usted contribuyó a publicar desde mayo de 2020.	Not using, just input for our work

Table 19: **Endline Journalists-Questions and Variables- continued**

Q78	¿Con qué frecuencia usted compartió en redes sociales contenidos periodísticos que buscaban combatir la desinformación en Bolivia, desde mayo de 2020?	
Q79	Indique links a contenidos periodísticos que buscaban combatir la desinformación en Bolivia que compartió en redes sociales desde mayo de 2020.	
didicil_desinfo	Desde mayo de 2020, ¿qué tan difícil encontró usted contribuir a publicar en medios en línea contenidos periodísticos que buscaban combatir la desinformación en Bolivia?	
Q81	Desde mayo de 2020, ¿con qué frecuencia se encontró con los siguientes desafíos para contribuir a producir contenidos periodísticos que buscaban combatir la desinformación en Bolivia?	Not a question
Q81_1	Falta de libertad para decidir sobre los temas en lo que trabajo	Measure of restrictions to decide what journalistic content they produce
Q81_2	La línea editorial de los medios donde trabajo sobre como cubrir una noticia	Measure of restrictions to decide what journalistic content they produce
Q81_3	La necesidad de producir artículos cortos	Measure of restrictions to decide what journalistic content they produce
Q81_4	En general, falta de tiempo o recursos	Measure of restrictions to decide what journalistic content they produce
Q81_5	Dificultad para detectar desinformación	
Q81_6	Falta de fuentes para hacer verificaciones	
Q81_7	Falta de conocimiento sobre herramientas para hacer verificaciones	
Q81_8	Dificultad para escribir desmentidos atractivos	
Q81_9	Dificultad para encontrar medios en donde publicar desmentidos	
Q81_10	Desinterés en desinformación de la audiencia en los medios donde trabajo	Measures of audience interest - producing
Q81_11	Dificultad de cambiar la opinión sobre la desinformación de la audiencia de los medios donde trabajo	Measures of audience interest - producing

Table 20: **Endline Journalists-Questions and Variables- continued**

Q81_12	Temor a posibles ataques por los contenidos periodísticos que contribuyo a producir	Measure of restrictions to decide what journalistic content they produce
Q81_13	Presiones políticas	Measure of restrictions to decide what journalistic content they produce
Q82	Desde mayo de 2020, ¿qué tan difícil le resultó compartir en redes sociales contenidos periodísticos que buscaban combatir la desinformación en Bolivia?	
Q83	Desde mayo de 2020, ¿con qué frecuencia se encontró con los siguientes desafíos para compartir en redes sociales contenidos periodísticos que buscaban combatir la desinformación en Bolivia?	Not a question
Q83_1	Temor al monitoreo por parte de los medios donde trabajo	Measures of restrictions to decide what journalistic content they share
Q83_2	En general, falta de tiempo o recursos	Measures of restrictions to decide what journalistic content they share
Q83_3	No tengo audiencia en redes sociales con quien compartir contenidos periodísticos	Measures of restrictions to decide what journalistic content they share
Q83_4	Desinterés en desinformación de mi audiencia en redes sociales	Measures of restrictions to decide what journalistic content they share
Q83_5	Es difícil combatir la desinformación cuando es viral	Measures of restrictions to decide what journalistic content they share
Q83_6	Dificultad de cambiar la opinión sobre la desinformación de mi audiencia en redes sociales	Measures of audience interest - sharing
Q83_7	Temor a posibles ataques por los contenidos periodísticos que comparto	Measures of restrictions to decide what journalistic content they share
Q83_8	Presiones políticas	Measures of restrictions to decide what journalistic content they share
Q31	Para concluir, le vamos a hacer algunas preguntas sobre su conocimiento de estrategias para identificar y combatir la desinformación en Bolivia.	Not a question
conocimiento_desinfo	¿Qué tanto conocimiento cree usted tiene sobre las características típicas de una noticia falsa?	
Q84	¿Cuáles de las siguientes son las características típicas de una noticia falsa?[Selecciones todas las opciones que crea correctas]	

Table 21: **Endline Journalists-Questions and Variables- continued**

Q85	Q85 Desde mayo de 2020, ¿con qué frecuencia comparte en redes sociales noticias que cree pueden ser falsa sin intentar antes verificar si son verdaderas o falsas?	
Q86	Si usted sospecha que una noticia es falsa, ¿qué tanto conocimiento cree usted tiene para verificar si la noticia es verdadera o falsa?	
Q87	De la lista debajo, ¿cuáles son formas correctas para asegurarse que una noticia es verdadera?	
iniciativas_orgs_des	Indique las iniciativas y organizaciones que existen para combatir la desinformación.	
Q88	¿Cuánto conocimiento cree usted tiene sobre estrategias para escribir verificaciones atractivas que combatan la desinformación en Bolivia?	
Q89	De la lista debajo, ¿cuáles son estrategias correctas para escribir una verificación atractiva para combatir la desinformación?	
Q90	¿Cuánto conocimiento cree usted tiene sobre estrategias exitosas para distribuir verificaciones que buscan combatir la desinformación para que interesen y lleguen a un gran público?	
Q91	De la lista debajo, ¿cuáles son estrategias correctas para distribuir con éxito verificaciones que buscan combatir la desinformación para que interesen y lleguen a un gran público?	
Q92	¿Qué tanto cree que las siguientes audiencias están interesadas en contenido periodístico que busca combatir la desinformación?	Measures of audience interest - production, Measures of audience interest - sharing
Q92_1	Audiencias en periódicos	
Q92_2	Audiencias en Redes Sociales	
Q94	¿Qué tan difícil cree es cambiar la opinión de las siguientes audiencias si le comparte contenido periodístico que busca combatir desinformación que incorrectamente desprestigiaba a una figura política con la que la audiencia no simpatizaba?	Measures of audience interest - production, Measures of audience interest - sharing
Q94_1	Audiencias en periódicos	
Q94_2	Audiencias en Redes Sociales	

Table 22: **Endline Journalists-Questions and Variables- continued**

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