

# Can We Shield Citizens Against Misinformation Through Digital Literacy Training and Fact-checks?

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**We partnered with a Bolivian fact-checker organization, Chequea Bolivia, to address the misinformation problem in the Global South by providing digital literacy training and fact-checks. We recruited two samples: one received the training material through an online workshop (Online) and the second through WhatsApp messages (WhatsApp). Participants were randomly assigned to only receive fact-checks (Verification), only training (Course), both training and fact checks (Course and Verification), or nothing (Control). In general, we found that both delivery methods successfully inoculate participants, although through different mechanisms. The Online method has a large effect on knowledge and builds more capacity to discern fake news, but not effect on new consumption. In turn, the WhatsApp delivery method increased citizens' awareness of misinformation, ultimately altering participants' level of consumption. Last, we found that those that received verifications through WhatsApp messages share less fake news.**

## Introduction

Misinformation has been an increasing concern around the globe because it might lead people to take adverse actions or decisions based on false premises. Misinformation extends to any relevant subject in society, from health and economic issues to politics. More recently, misinformation has become pervasive around the COVID-19 pandemic. Misinformation's growth and consequences are severe in the Global South, where social media - the primary source of misinformation - is rapidly extending among populations with low levels of digital literacy. For instance, misperceptions about COVID-19 (1) and other diseases like Zika are widely believed (2) in the Global South.

Most misinformation studies focus on debunking (exposure to fact-checks) to correct misinformation in the short term. Debunking interventions can be effective. (3), show that corrections from qualified fact-checkers effectively reduce misperceptions. Also, corrections from trusted institutions are more successful among those with substantial initial misperceptions (4). However, debunking can have backfiring effects; for instance, exposure to general warnings can decrease beliefs under truthful information (5). Thus, the evidence on correcting misinformation through fact-checks, specifically to change individuals' beliefs when priors are strong, is mixed (6). Moreover, when an intervention successfully changes beliefs, these shifts tend to be ephemeral or fail to be persistent over time (7, 8).

Another technique to correct misinformation is "prebunking," or *inoculation* by exposing people to past misinformation, warnings, and teaching tactics. Inoculation can engender resistance to future encounters with misinformation (9, 10). Also, effectively warning individuals of the threat of misinformation can reduce the extent to which it affects them (11). Several studies show the benefits of *inoculation* as a tool to spot and build resistance against misinformation (12–14).

A third technique to avoid misinformation is digital literacy training. However, in-person and online digital media literacy interventions are scarce and might have backfiring effects by making individuals over-confident in their abilities to discern fact from fiction (15). Moreover, literacy training had shown null or low effectiveness. In particular, in-person literacy training significantly impacts those more educated and has no effect in less literate environments (16). Additionally, short literacy training by exposure, correction, and revealing the importance of misinformation did not affect participants' ability to identify information in a low literacy context (17).

Most of these interventions on debunking, inoculation, or digital literacy training focus primarily on the Global North, with few on the Global South. Bowles et al. (18) showed that a long-term intervention disseminated via WhatsApp in the Global South can have a sustained effect in altering participants' ability to discern false information, increase their knowledge of verification, and reduce their trust in social media. However, it fails to shift participants' consumption behaviors. Furthermore, Bowles, Larreguy, and Liu (1) showed that debunking through WhatsApp messages via a reliable source alters participants' behavior in the short term and induces people to reevaluate their COVID-19 misconceptions in Zimbabwe. Although the COVID-19 pandemic sparked interest in field experiments in the Global South, there is still a need for further research to understand the effectiveness of different intervention approaches in the Global South to shield citizens against misinformation and evaluate lasting effects on varied outcomes to find potentially scalable solutions to the problem of misinformation.

We partnered with Chequea Bolivia, a recent but renowned fact-checker organization that, since June of 2019, has been uninterruptedly debunking information, sharing corrections and tactics on how to discern truthful from false information, as well as delivering digital literacy courses to lessen the consequences of misinformation in Bolivia.

Through Chequea Bolivia's Facebook and webpage, we recruited two samples of Bolivian

individuals. The first sample aimed to recruit subscribers for an online workshop on misinformation (Online sample). The second sample aimed to attract WhatsApp users to acquire similar information through WhatsApp messages (WhatsApp sample). Both samples were randomly assigned to either receive all the information from the course after completion of the endline survey (Control group) or one of our three treatment arms. The first treated group had a chance to take both the training – through an online course or similar content delivered through WhatsApp messages – and the fact-checks published on Chequea Bolivia’s online site during the intervention period (Course and Verification). The second group only took the online course or obtained the course information through WhatsApp messages (Course). The remaining participants were assigned to receive only the fact checks published on Chequea Bolivias’ webpage (Verification).

This study was designed in this way for several purposes. First and more importantly, we wanted to combine previous methods of assessing information: literacy training, inoculation, and fact-checks on a single intervention. This study differs from preceding short-term literacy training interventions (17) in that ours is longer. The online workshop lasted roughly a month and the WhatsApp sample received course information for 10 days to maximize attention. Second, we aim to compare, given the same information, which, or for what purposes, each delivery method – Online vs. WhatsApp – is more effective at internalization and provoking changes in broader behaviors such as consumption. For instance, the online course was self-paced, respondents were only given a deadline to complete the course’s units, and they had two in-person practice sessions. On the other hand, WhatsApp users only got messaged with content from the course once a day. Third, we want to assess which treatment is more effective: receiving the course information, receiving only the verifications, or getting both.

To this end, we first analyze how participants interacted with the course information or verifications from Chequea Bolivia. Following prior studies, we then study whether combining

digital literacy training and fact-checks can have an effective impact on reducing misinformation (19) or whether news literacy messages on social media correct misinformation (20). Thus, we measure whether the intervention increased their interest and attention to misinformation and their ability to discern between truthful and false sources of fake news. Third, we assessed the change in trust in different information sources and participants' increase in self-reported and indirect knowledge to discern and verify the information. Last, we evaluate whether tools to identify misinformation and shifts in trust of information sources can extend to shifts in broader behaviors (21, 22).

In conclusion, we aim to combine debunking, inoculation, and literacy training through a course delivered either online or via WhatsApp messages and the dissemination of fact-checks. Moreover, our study focuses on the Global South and its long-term effects rather than on the Global North and its short-term outcomes. Furthermore, we seek to establish a comparison between two delivery methods and understand which one is more effective: the online course or WhatsApp messages. Lastly, we seek to understand if this intervention can increase individuals' awareness of misinformation and shift their consumption, sharing, and verifying behaviors.

## **Sample recruitment, treatment assignment, and content distribution**

During the last week of January, Chequea Bolivia launched an open call to sign-up for a free virtual workshop called *Habilidades críticas y digitales contra la desinformación* (Critical and digital skills against misinformation, in English) with the possibility to earn an official certificate after completion. Through its webpage and social media accounts, Chequea Bolivia recruited participants to take the workshop. The Facebook post title was: *Atención Bolivia, ¿Quieres ser parte de la lucha contra la desinformación?* (Attention Bolivia: Do you want to be part of the fight against misinformation? in English) and featured information about the

virtual workshop and photographs depicting the topics covered: over-information, journalism, critical thinking, assessing information, digital media, digital content, digital disinformation, misinformation, and fake news, digital tools, and verification methodology. Afterwards, we incentivized participants to answer a baseline survey of approximately 15 minutes with the chance of being one of three USD 150 prize winners. These participants make up the Online sample. Participants of the WhatsApp sample were recruited similarly through social media posts from Chequea Bolivia.

Respondents from both samples were invited to subscribe to a WhatsApp list from fact-checker Chequea Bolivia and add the number to their phone contacts to be able to participate in the study. Participants first indicated their consent to be part of the project and agreed to answer the baseline surveys; then, they were screened for eligibility.

We first verified that prospects from both samples had sent a message to subscribe Chequea Bolivia's WhatsApp number and add it to their contacts. Next, individuals were only eligible for any intervention if they were at least 18 years old, lived in Bolivia at the time of the intervention, had a Bolivian cellphone number, and a WhatsApp account (if applicable). Then, if participants met the eligibility criteria, they could answer the rest of the questions from the baseline survey. At the end of the baseline survey, respondents from both samples were invited to provide their Facebook and Twitter accounts to measure treatment effects in their posts before and after the intervention. Additionally, the WhatsApp sample was required to subscribe to a second WhatsApp list from the research team and add the number to their contacts to receive future communications.

In the end, 310 people completed the baseline survey of the online workshop and 528 the WhatsApp survey, see Table 1. Both the survey for the Online and the WhatsApp sample reported participants' demographics, social media use, information consumption, interest in misinformation, opinions on the likelihood of false of different information sources, knowledge

to identify and verify misinformation, and were asked to report attitudes on hypothetical scenarios regarding receiving fake and truthful information and whether they would trust, verify, and share such news. Lastly, the baseline survey included questions on broader behaviors on consumption, sharing, and verifying information.

Participants that completed the baseline survey were randomly assigned, for each sample separately, to either receive no course information until March (Control), or to any of the three treated groups: Course and Verification, Course, and Verification. We block-randomized respondents for each sample separately by demographic characteristics, exposure to misinformation, knowledge to discern and verify misinformation, and participants' beliefs of how likely are different news sources to provide false information. Table 1 summarizes the number of members in each treatment arm for each sample at baseline. After the treatment groups were formed, participants either took the course or received only fact-checks, both, or nothing. The course is aimed at literacy training to give individuals the knowledge to navigate their information environment mindfully and critically (23) and to stimulate critical thinking by understanding the negative impacts of misinformation (5), as well as corrections through the distribution of fact-checks.

The online course started on February 3rd and continued for over a month; it had four main units and an additional practical workshop. The units were divided into (1) misinformation and digital citizenship; (2) analyzing news through critical thinking; (3) the digital ecosystem; and (4) fact-checking and digital abilities. Each unit required roughly two hours to complete. In addition, the content of each element is very interactive, given that it contains videos, podcasts, lectures, and quizzes designed particularly for this course. Furthermore, each unit had a final summary to reinforce the information learned. The first section aimed to recognize the importance of media literacy in constructing a more digitally informed society in a high-misinformation environment. The second unit served to develop critical thinking abilities to

evaluate information. The third module sought to teach and identify the most relevant features of the digital world. The fourth element taught Chequea Bolivia's methods and usage of digital tools as support to verify misinformation. Lastly, the course ended with an assessment that included practical applications to reinforce each unit and a final test.

On the other hand, the WhatsApp course ran from February 17 to 27, with the material divided into three parts: (1) Introduction to misinformation, (2) Critical thinking and biases, and (3) Fact-checking. The first module ran for five days and included a 5 minute, 33 seconds video on methodologies to verify fake news, infographics on fake images, videos, fake audios, and deep fakes. The second module ran for three days consisting of a 5 minute, 25 seconds video on the importance and use of critical thinking to interpret, analyze, evaluate, infer, and explain information, followed by an infographic on information consumption and biases in information processing. Last, the third and fact-checking module lasted three days and included a 5 minute, 33 seconds video emphasizing the means to identify, verify, and rectify false information; and two infographics summarizing what citizens can do to detect misinformation. Appendix Table S1 contains links and details on the WhatsApp course contents.

During March, we asked participants to respond to a ten-minute endline survey. Table 1 shows 205 and 258 responses for the Course and WhatsApp endline sample, respectively. Participants in the control group received the course information following the survey. All respondents were incentivized with the opportunity to participate in a lottery for three prizes of USD 150 each, and with the final certificate after completing the survey.

Table 1: Response rates by treatment assignment and by sample

| Sample                               | Treatment               | Baseline | Endline | Response rate |
|--------------------------------------|-------------------------|----------|---------|---------------|
| Sample Course delivered online       | Control                 | 83       | 66      | 0.80          |
|                                      | Course and Verification | 76       | 45      | 0.59          |
|                                      | Course                  | 73       | 35      | 0.48          |
|                                      | Verification            | 78       | 59      | 0.76          |
|                                      | Total                   | 310      | 205     | 0.66          |
| Sample Course delivered via WhatsApp | Control                 | 132      | 72      | 0.55          |
|                                      | Course and Verification | 132      | 65      | 0.49          |
|                                      | Course                  | 131      | 66      | 0.50          |
|                                      | Verification            | 133      | 55      | 0.41          |
|                                      | Total                   | 528      | 258     | 0.49          |

Through these surveys, we first analyze the effectiveness of the delivery methods as measured by the interactions with the course information or fact-checks from Chequea Bolivia. Then, we analyze whether combining digital literacy training and fact-checks can effectively reduce misinformation by studying an extensive range of outcomes.

## Sample demographics

Our combined endline sample from both surveys with 463 observations is demographically balanced across treatment arms; see Table S6. All respondents are above 18 years of age, reside in Bolivia at the time of the surveys, and have access to the internet. When comparing our sample with national and representative surveys of the Bolivian population, we encounter relevant differences among samples. We compared our sample with the latest Americas Barometer survey<sup>1</sup> (2021) with 3,002 observations and the most recent Latin Barometer survey<sup>2</sup> (2020) with 20,077 responses. Figure S6 presents the results for comparing age, gender, and education variables among our experimental sample, the Americas Barometer, and the Latin Barometer overall. We further restricted both national samples to respondents that reported having access to the internet in their household either by a paid contract or just by receiving an internet signal.

<sup>1</sup>Find data in <https://www.vanderbilt.edu/lapop/bolivia.php>.

<sup>2</sup>Find data in <https://www.latinobarometro.org/latContents.jsp>.

Relative to the unrestricted Americas Barometer and Latin Barometer, respondents in our experimental sample are younger. In general, younger people are easier to reach on social media, (sub-figure S6a), less likely to be female (sub-figure S6c), and more educated (sub-figure S6e). Although, the difference between the endline survey and both restricted samples to internet users is narrower, the discrepancies are still significant (sub-figure S6b, S6d, and S6f). See also Appendix Table S23 for more details. We later address these differences in our sample and find that our results will likely expand beyond our sample to the broader internet user population in Bolivia.

## Results

The endline survey of the online course sample had 205 responses, and the WhatsApp endline sample had 258 observations showing an overall response rate of 0.66 and 0.49, respectively. Both samples exhibit significant differential attrition, see Panel A of Table S4. However, the WhatsApp sample presents less differential attrition. To account for this differential attrition, we implement the Inverse Propensity Score Weighting (IPSW) technique to estimate treatment effects accounting for the difference in attrition, see the Supplementary Materials for additional details on our IPSW estimation. Notice that Panel B of Table S4 shows less differential attrition after implementing IPSW for both samples.

We presented our main findings using standardized Index Covariance Weighting (ICW) summary indexes of the outcome families at endline and created the analogous index at baseline when feasible. see Appendix Table S12 for details on the variables and directions of each index's component. Each index's component is set in the direction that we hope the treatment should lead to an increase in the outcome.

Table S6 shows that both samples are demographically balanced across treatment groups. However, Panel A of Table S5 shows imbalances for the main indexes at baseline for the Online

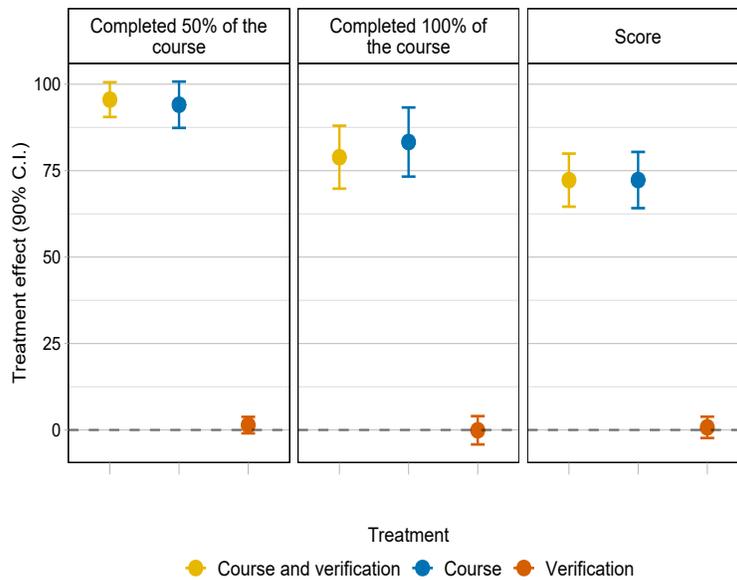
sample and a fair balance at baseline for the WhatsApp sample; tables S7 to S11 show in more detail balance for all baseline covariates. Noteworthy, the WhatsApp sample is significantly more balanced than the Online sample across most baseline variables. These imbalances are somewhat addressed when computing the IPSW (see Supplementary Materials for more details) resulting in a more balanced sample, see Panel B of Table S5. To conclude that we have a more balanced sample across treatments, we compared the number of coefficients statistically significant at least at the 90% level. Notice that the balance for the Online sample in Panel A.1 of Table S5 has 12 coefficients with  $p < 0.1$  and Panel B.1 has only 2 such coefficients out of 33; a major improvement in balance. Panel A.2 has 4, and Panel B.2 only 5 coefficients such that  $p < 0.1$  out of 33.

Throughout the analysis, we report treatment effects for both the Online and the WhatsApp samples on endline outcomes variables. Across all effects, we compare the different treatment arms, Course and Verification, Course, and Verification, relative to the Control group. For comparison and robustness purposes of the main effects, we implement three estimation techniques with the OLS method and adjust for randomization block fixed effects. Estimations further include the lagged dependent variable (if measured at baseline). First, the main results are simple OLS estimations including all covariates in the outcome family at baseline. Second, we estimate a Weighted Least Square (WLS) model with IPSW weights to account for differences in attrition. Third, we estimate an OLS model with covariates selected by a LASSO model from all baseline variables and indexes to increase statistical power and account for the lack of balance.  $HC_0$  robust standard errors are used throughout.

Using administrative data from Chequea Bolivia, we first show that the information was successfully disseminated for both samples. Figure 1 shows that for the online endline sample 95.5% ( $p < 0.001$ ) of the Course and Verification group and 94% ( $p < 0.001$ ) of the Course group completed at least 50% of the assessments in the course, and 78.9% and 83.3% ( $p <$

0.001) of each treatment completed 100% of the assignments, respectively. Furthermore, both treatment groups, on average, scored above 70/105 ( $p < 0.001$ ) in the survey questions, which implies that more respondents answered correctly the tasks related to the information delivered to them. As expected, participants assigned to the Verification treatment arm did not take the course (see analogous results for the baseline sample and more details in Appendix Table S2).

Figure 1: Percentage of respondents that completed 50% and 100% of the course, and the achieved score for the sample whose course was delivered online



Notes: Columns (1) and (2) are indicators for completing the corresponding percentage of the course material. Column (3) is the final score after completion of the assessment section. The estimates and 90% confidence intervals in each box are from separate OLS regressions, where the outcome is the corresponding label regressed on treatment indicators and randomization block fixed effects. The outcomes are in Panel B of Table S2.

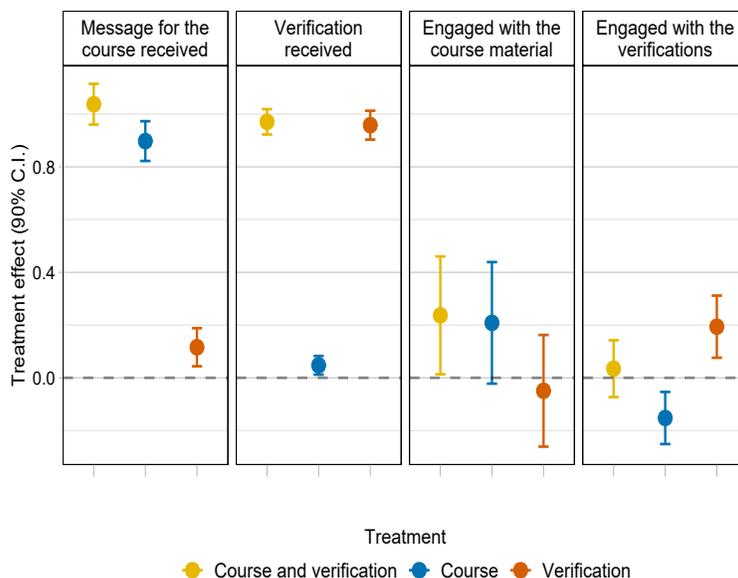
Similarly, Chequea Bolivia’s data shows that the information was successfully delivered to the WhatsApp sample. The left panel of Figure 2 exhibits that both the Course and Verification and the Course treatment groups successfully received the messages related to the course material ( $p < 0.001$ ). Notably, the Course and Verification group displays higher reception and interaction (93%,  $p < 0.001$ ). As expected, the Verification treatment shows no difference from

the Control group. Likewise, the second panel of Figure 2 shows that the Course and Verification and the Verification arms received fact-checks (99% and 97%, respectively  $p < 0.001$ ). The third and fourth panel of the same Figure presents the results of active interactions with the course material and verifications sent.<sup>3</sup> An active interaction is an individual responding or commenting to any course message or verification sent at any time during the intervention. Similar to the messages received, the third panel shows that the Course and Verification and Course treatment groups actively engaged with the course material ( $p = 0.001$  and  $p = 0.002$ , respectively). The right panel shows that although the Course and Verification group did not show an active response to the verifications sent ( $p = 0.544$ ), the Verification group actively responded to the fact-checks ( $p = 0.015$ ). Additional details for all panels can be found in Appendix Table S3.

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<sup>3</sup>Although Chequea Bolivia did not keep records of the engagement with fact-checks for the entire sample, this data is available for the WhatsApp sample.

Figure 2: Interaction with videos, messages, and verifications for the sample whose course was delivered by WhatsApp



Notes: Each column is an indicator variable for the corresponding outcome. The estimates and 90% confidence intervals in each box are from separate OLS regressions, where the outcome is the corresponding label regressed on treatment indicators and randomization block fixed effects. The outcomes are in Panel B of Table S3.

After assessing the treatment’s effective dissemination, we analyze the treatment effects on the main endline indexes relative to the Control group. Appendix Table S13 summarizes all the results explained below and Appendix Tables S14 to S22 contain the treatment effects for the components of each index separately.

### Misinformation importance

We first measure the respondents’ perceptions of misinformation after the intervention by asking how likely it is that misinformation contributes to different problems in Bolivia. Problems ranged from health issues to electoral concerns, including ideological polarization, violence, and hatred towards certain groups of people in Bolivia, see Appendix Table S14 for details on the problems asked about. The left panel of Figure 3a shows statistically insignificant effects

across all treatment arms for the Online sample on the ICW index of indicators when misinformation affects Bolivian problems. The Course group of the WhatsApp sample presents a marginally significant decrease ( $-0.277$  SD,  $p = 0.096$ ) when relating misinformation to Bolivian problems, see panel 1 of Figure 3b. Throughout, to further support our results with statistical evidence, we computed Bayes Factors, which are the ratios of the null and alternative marginal likelihood models using our experimental data. The null model assumes that the coefficient of interest is equal to zero. In this case, we found that the data supported the null model over the alternative model with a Bayes Factor of 0.248 for this marginally significant decrease, see Table S28. The data also supports the null model for the rest of coefficients with a Bayes Factor of 0.106 - 0.818. The IPCW and LASSO estimates are consistent with these findings, see panel 1 of Appendix Figure S2 or column 1 of Table S13 for additional details.

### **Likelihood of false sources and Distrust sources**

Next, we analyze participants' beliefs about how likely different news sources are to distribute misinformation (likelihood of false) and how much they trust the information in these sources. We examine the treatment effects on both likelihoods of false and distrust by dividing each category into two indexes, capturing traditional or social media sources. Traditional sources include radio / TV, newspaper, and the internet, whereas social media include WhatsApp, social media in general, and casual conversations with family and friends.

First, Appendix Figure S1 supports the null model over the alternative, with Bayes factors of 0.119 - 0.743, see Table S28, in testing the decrease in the likelihood of false of traditional sources for both the Online and the WhatsApp survey. Mirroring this behavior, we statistically rejected effects on trusting more traditional sources with Bayes factors ranging from 0.074 to 0.516 for both samples. Notably, Appendix Figure S2 displays a decrease in the likelihood of false of traditional sources for the Course and Verification group of the Online sample for the

LASSO estimations (0.393 SD,  $p = 0.021$ ); with a consistent statistical insignificant effect for the rest of the treatments in both samples. The IPSW and the LASSO estimates capture no effect in trusting more traditional sources.

On the other hand, panel 2 of Figure 3b shows an increase in the belief of falsehood of information received on social media across all treated groups of the WhatsApp sample in similar magnitudes (Course and Verification: 0.357 SD,  $p = 0.011$ ; Course: 0.262 SD,  $p = 0.086$ ; Verification: 0.285 SD,  $p = 0.03$ ) relative to the Control group. When implementing IPSW and LASSO, the effects are consistent in magnitudes and significance.

Consistent with the increase in the falsehood of news coming from social media, participants from the WhatsApp sample also increased their distrust of information coming from social media. In particular, from panel 3 of Figure 3b, we notice that the Course group and the Verification one distrust social media more than the Control group in similar magnitudes (Course: 0.343 SD,  $p = 0.022$ ; Verification: 0.277 SD,  $p = 0.095$ ). Both treatment effects are validated through the LASSO estimates, see columns 3 and 5 of panel C.2 of Table S13, with an increase in magnitude and significance (Course: 0.39 SD,  $p = 0.006$  ; Verification: 0.266 SD,  $p = 0.052$ ). Also, the IPSW method is robust in magnitude and significance, see Appendix Figure S3.

The treatment effects of the WhatsApp sample display larger effects and are consistent with the belief that the intervention should reduce their trust in social media and increase the likelihood of false news coming from social media sources.

### **Attention to misinformation**

Then, we measure the attention paid to misinformation by respondents from both surveys by asking how much attention they pay to misinformation when looking at the news.

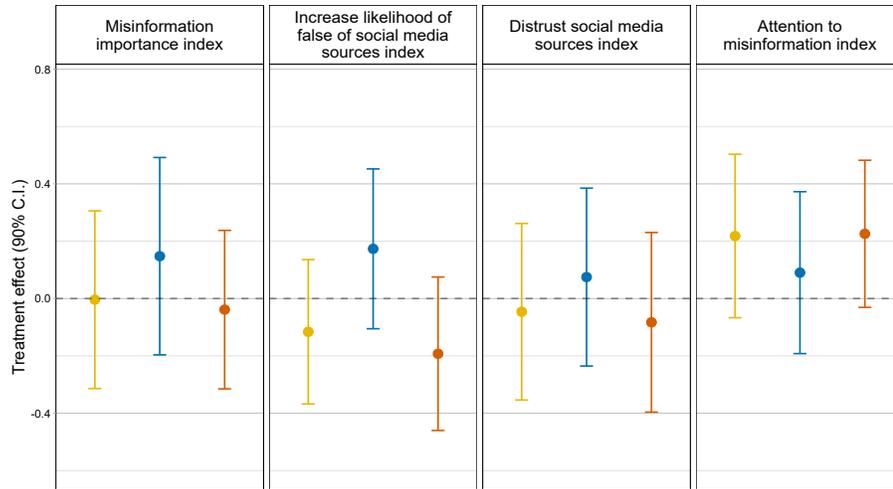
The results in panel 4 of Figure 3a show that the Online intervention did not increase par-

ticipants' attention to misinformation at the 90% level. However, estimates show that those that receive verifications via WhatsApp have similar and large positive effects (Course and Verification: 0.218 SD,  $p = 0.208$ ; Verification: 0.226 SD,  $p = 0.148$ ). Although marginally insignificant, the data support the alternative model over the null with a Bayes factor of 2.049 for the Course and Verification group, see Table S28. These effects hold with IPSW and LASSO estimates, with the Verification group statistically significant at the 90% level in the IPSW model (0.271 SD,  $p = 0.093$ ), see panel 2 of Appendix Figure S2a.

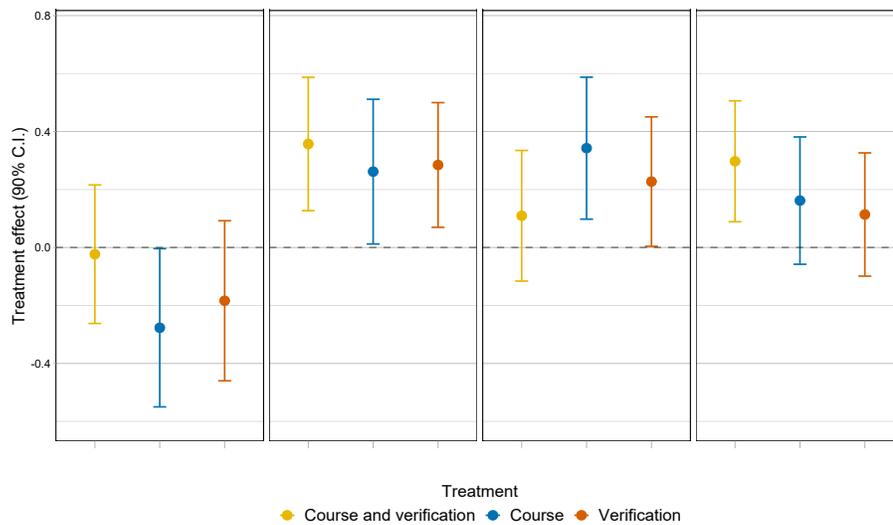
Regarding the WhatsApp sample, panel 4 of Figure 3b shows an increase in the attention paid by the Course and Verification treatment group (0.297 SD,  $p = 0.020$ ), which is also supported by the corresponding IPSW and LASSO coefficients at the same significance level and magnitude in panel 2 of Appendix Figure S2b. Furthermore, panel 4 of Figure 3b shows that the Course and the Verification groups have a positive and large effect (Course: 0.162 SD,  $p = 0.227$ ; Verification: 0.114,  $p = 0.0358$ ). While underpowered, everything delivered via WhatsApp (the course for the WhatsApp sample and verifications for both samples) has large magnitudes. The data also support the alternative model over the null with a Bayes factor of 1.072 for the Course group, see Table S28.

Figure 3: Treatment effects on mechanisms: misinformation importance, misinformation attention, likelihood of false of traditional and social media sources, and distrust of traditional and social media sources

(a) Sample course delivery online



(b) Sample course delivery WhatsApp



Notes: The estimates and 90% confidence intervals in each box are from separate OLS regressions. The labels are the corresponding dependent variables regressed on treatment indicators and randomization block fixed effects. The outcomes are in columns (1), (3), (5), and (6) of Panel A of Appendix Table S13.

## **Knowledge to identify and verify fake news**

We then assess whether participants were able to identify between potentially false and truthful information and if they could verify the veracity of news by different means. We measured how much participants could discriminate false news using self-reported and objective measures. Firstly, participants were asked to report how much knowledge they have to identify whether a piece of news is false or not; secondly, participants were asked to identify characteristics of false news from a list that included correct and incorrect answers, recent misinformation cases in Bolivia, and if they could identify the main sources through which fake news are spread.

Although the left panel of Figure 4 shows uniformly statistically insignificant effects for all treatments in both samples relative to their Control groups at the 90% level, those that took the course online (Course and Verification and Course of the Online sample) have large and indistinguishable estimates (Course and Verification: 0.197 SD,  $p = 0.259$ ; Course: 0.245 SD,  $p = 0.206$ ). The left panel of Appendix Figure S4a shows that these results hold for the IPSW estimates and improve for the LASSO coefficients (Course and Verification: 0.212 SD,  $p = 0.190$ ; Course: 0.374 SD,  $p = 0.042$ ).

Respondents' increase in knowledge to verify the information was also measured by asking how much knowledge they possessed, what ways to verify the news they knew, and what fact-checkers they could use to verify the veracity of some information. The right panel of Figure 4a shows that similarly to the reported knowledge to identify information, participants that took the online course increased their knowledge to verify information (Course and Verification: 0.606 SD,  $p < 0.001$ ; Course: 0.569 SD,  $p < 0.001$ ). Likewise, the verification group reported no effect. Panel 2 of Appendix Figure S4a shows that these results are robust in the same significance level for both the IPSW and LASSO estimates.

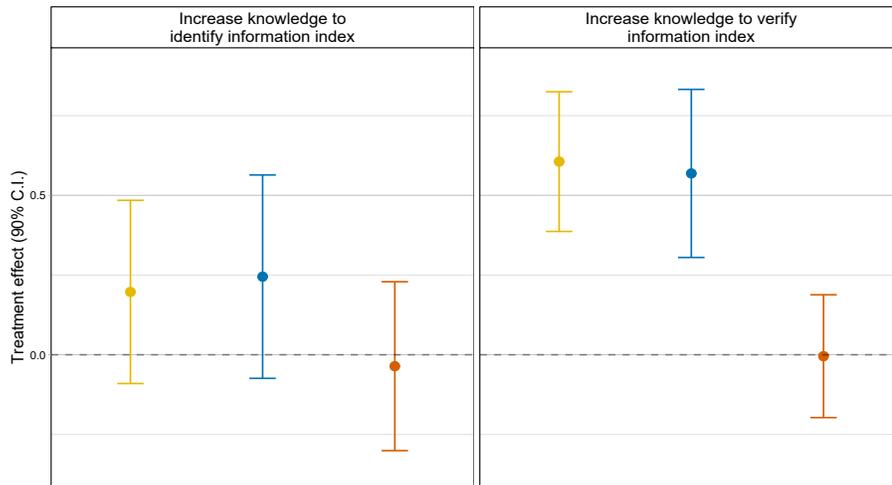
The Course group of the WhatsApp sample also had a marginally significant increase in their knowledge to verify information (0.22 SD,  $p = 0.075$ ), and this result is robust to the

IPSW and LASSO results. While underpowered, the Course and Verification group shows a similar effect in magnitude (0.15 SD,  $p = 0.23$ ), mainly supported with the LASSO estimate (0.19 SD,  $p = 0.11$ ), see Appendix Figure S4b. In this case, the data strongly supports the alternative model over the null hypothesis for the Course and Verification group with a Bayes factor of 584.261.

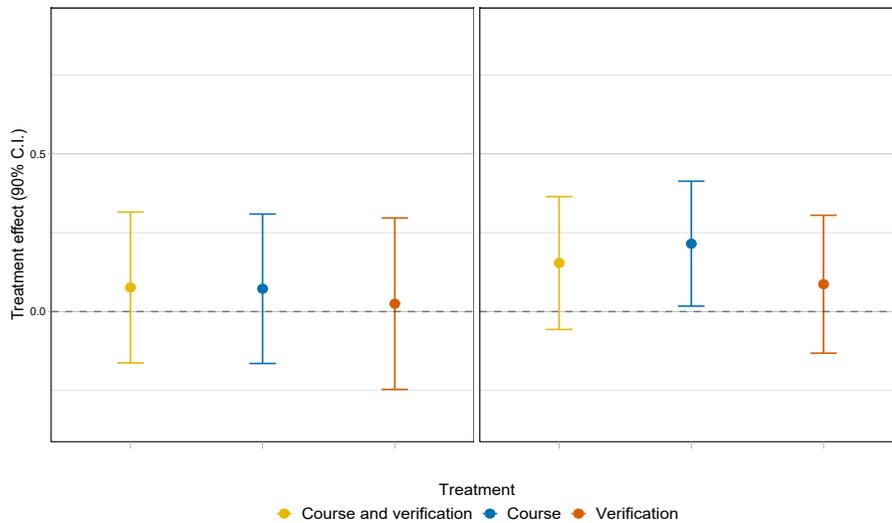
Clearly, the subset of the Online sample that took the course increased their ability to verify information by employing fact-checkers and identify the main characteristics of both fake and truthful news, as supported by Appendix Table S19. Contrary to the prior results, the Online delivery method was more efficient when teaching how to identify and verify information than the WhatsApp intervention.

Figure 4: Treatment effects on knowledge to identify and verify misinformation

(a) Sample course delivery online



(b) Sample course delivery WhatsApp



Notes: The estimates and 90% confidence intervals in each box are from separate OLS regressions. The labels are the corresponding dependent variables regressed on treatment indicators and randomization block fixed effects. The outcomes are in columns (7) and (8) of Panel A of Appendix Table S13.

## **Information consumption, sharing, and verification**

Finally, we turn to evaluate if the shift in participants' beliefs of how likely news' is to be false depending on their source, their (mis)trust of different sources, as well as the changes in the capacity to identify and verify likely misinformation, affected different behaviors relating to the consumption of news and misinformation. In particular, the intervention measures how each treatment group modified their behavior regarding the consumption of traditional and social media sources, sharing news on social media, and verifying information.

### **Consumption behavior:**

To assess the effect on consumption, we created a separate index for the consumption of traditional media and a second one for social media. As expected and consistent with prior findings in the decrease in the likelihood of false and increase in trust in conventional sources, the right panel of Appendix Figure S1 shows no statistically significant effect in the consumption of traditional sources across all treatment arms for both samples. Similarly, Appendix Table S28 shows that the data support the null model over the alternative with Bayes factors ranging from 0.08 to 0.329. These results are robust to the LASSO estimation and IPSW, see panel 1 of Appendix Figure S5.

Similarly, the left panel of Figure 5a shows consistent results in participants' updated beliefs in the likelihood of false of social media, change in trust towards information from social media sources, and knowledge to identify and verify the information. The Online sample had no statistically significant effect on those that only took the online course and an increase in consumption of social media sources for those that received verifications in similar magnitudes (Course and Verification:  $-0.23$  SD,  $p = 0.169$ ; Verification  $-0.258$  SD,  $p = 0.087$ ). Both the IPSW and LASSO estimates are consistent with these results, see panel 2 Appendix Figure S5b. Intuitively, the Online sample is more prepared and confident at identifying and verifying

false information, so they continue consuming news from social media.

In turn, the WhatsApp sample presents less consumption of social media sources across all treatment arms (Course and Verification: 0.269 SD,  $p = 0.065$ ; Course: 0.364,  $p = 0.003$ ; Verification: 0.464 SD,  $p = 0.001$ ); see the left panel of Figure 5b. Also, panel 2 of Appendix Figure S5b supports these effects at the same significance level for the IPSW and the LASSO estimates. Intuitively, all treatment groups reported an increase in their belief that social media tend to contain false news and increased their distrust towards information coming from social media. Thus, altering their behavior towards the consumption of news from these sources by consuming less information.

### **Sharing behavior:**

Moreover, panel 2 of Figure 5a also shows the shift in participants' willingness to share information on social media. While the only statistical significant result at the 90% level is the Verification group of the Online sample (0.374 SD,  $p = 0.043$ ), the course group also has a large coefficient (0.292 SD,  $p = 0.209$ ), which the IPSW estimate improves in magnitude and significance (0.366 SD,  $p = 0.066$ ). The LASSO estimate is consistent in magnitude and significance for both groups. Intuitively, participants of the Online sample tend to share less fake news because they know how to identify and verify misinformation.

Although there is a statistical insignificant treatment effect at the 90% level across all arms for the WhatsApp sample, the Verification group shows a large effect (0.243 SD,  $p = 0.151$ ) that turns marginally significant for the IPSW (0.278 SD,  $p = 0.089$ ) and LASSO (0.319 SD,  $p = 0.061$ ) estimations, see panel 3 of Appendix Figure S5b. Furthermore, we found that the data support the alternative model over the null with a Bayes factor of 2.067 for the Verification group, see Appendix Table S28.

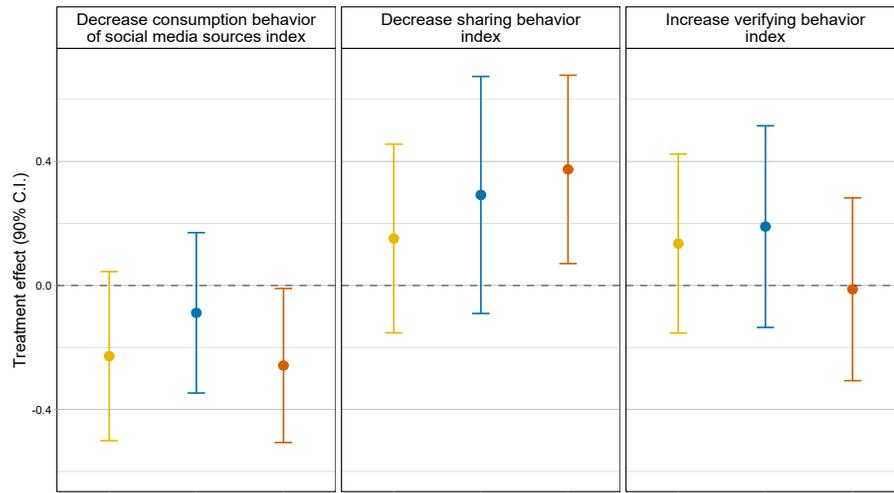
**Verifying behavior:**

Finally, we asked respondents to self-report how often they verify news that they doubt may be false. The right panel of Figure 5 shows statistically insignificant effects for all treatments in both samples. The IPSW and the LASSO estimates also show no effects. Similarly, we statistically rejected all effects when using Bayes factor with values ranging from 0.071 to 0.283, see Appendix Table S28.

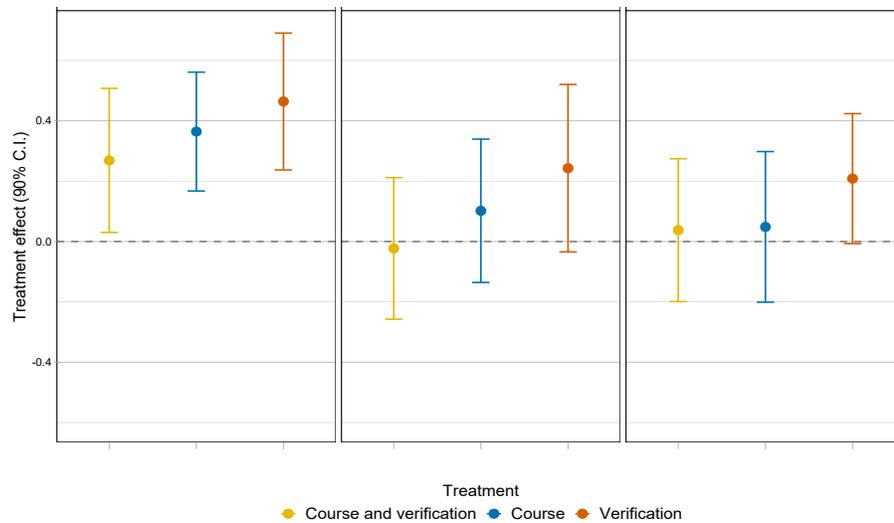
To sum up, the change in consumption of social media sources for the WhatsApp sample suggests that participants' increase in the likelihood of false information that circulates in social media, as well as their change in trust towards social media as sources of information, extend to significant effects in the sources of information from which they consume news. Furthermore, the increase in actual knowledge to identify and verify information from those in the Online sample extrapolates to sharing less misinformation on social media. Additionally, the IPSW and LASSO estimates show that those that received fact-checks from Chequea Bolivia through WhatsApp messages decreased sharing of false news on social media by large magnitudes. Nevertheless, both interventions fail to shift participants' verifying behaviors.

Figure 5: Treatment effects on consumption, sharing, and verifying behavior

(a) Sample course delivery online



(b) Sample course delivery WhatsApp



Notes: The estimates and 90% confidence intervals in each box are from separate OLS regressions. The labels are the corresponding dependent variables regressed on treatment indicators and randomization block fixed effects. The outcomes are in columns (10) - (12) of Panel A of Appendix Table S13.

## Robustness checks

As mentioned earlier, Figure S6 shows comparable demographic variables among our experimental sample, the Americas Barometer from the year 2021, and the Latin Barometer from the year 2020 and displays a significant difference between our sample and both national samples. The experimental sample is younger, more educated, and less likely to be female. However, when adjusting with post-stratification weights for these differences, we find that our results are likely to expand beyond the experimental sample to the broader internet user population in Bolivia. Appendix Figures S7 to S10 compare the main family ICW indexes estimations for our sample, which was adjusted to mimic the Americas Barometer and the Latin Barometer independently. Appendix Table S24 weights for the Americas Barometer population and Appendix Table S25 weights for the Latin Barometer population. Both adjustments suggest that our findings largely hold.

Last, we scrapped participants' posts on Facebook and Twitter to check if they shared fake news and fact-checks. We created fake-news models using the neural network model for language processing, BETO, to identify whether a post was fake or not. Then, we made a single ICW index out of the dummy variables from each model to increase statistical power.

First, Appendix Figure S26 shows that out of the 838 baseline responses, 414 reported at least their Facebook or Twitter account. Also, out of the 414, 133 individuals posted at least once during the intervention period. Although we have a small sample, it is well-balanced. Column 1 shows a balanced sample for reporting social media accounts, column 2 presents a balance for posting at least once during the intervention period, and column 3 on the number of posts.

Furthermore, Appendix Figure S27 shows consistent results with the decrease in sharing misinformation from the endline survey data. The Verification group from the Online sample has a similar effect in magnitude and significance (0.39 SD decrease;  $p < 0.05$ ) than the corre-

sponding effect shown in the survey data. Likewise, those that took the course also shared less misinformation (0.39 SD decrease;  $p < 0.1$ ) with a larger coefficient than the treatment effects from the endline survey. Consistently with prior findings, the WhatsApp sample shows a null effect across all treatment arms in decreasing sharing of misinformation. Also, the Verification group of the WhatsApp sample shows the largest effect of the three treatment arms (0.16 SD decrease).

Finally, no treatment arm from either sample presents an effect on sharing fact-checks.

## **Discussion**

The digital literacy training and fact-checking intervention to shield citizens against misinformation led to the following conclusions. First, this work shows that it is feasible to attract individuals to consume literacy training and fact-checking regarding misinformation through digital means.

Second, both delivery methods had different but remarkable results. On the one hand, the more elaborated information delivered through the online course and the longer intervention led the Online sample to get inoculated by teaching them actual tools to identify and verify information. Moreover, those on the Online sample that received fact-checks through WhatsApp messages pay more attention to misinformation. As a result of these effects, participants continued to consume information and did not reduce their consumption behavior; however, because of their increase in knowledge and awareness of misinformation, they tend to share less misinformation on social media.

On the other hand and although the WhatsApp sample received less elaborate information during a shorter period of time, participants' awareness increased more than those that received the course online. The WhatsApp sample had more significant effects on most outcome indexes. It yields positive treatment effects in participants' ability to discern more likely sources

of misinformation. Thus, they increase their distrust of social media as a reliable source of information. Similar to the Online sample, those that received the course and fact-checks through WhatsApp messages increased their attention to misinformation. Moreover, the increase in distrust and attention paid to misinformation led participants that took the course (Course and Verification and Course groups) to increase their knowledge to verify the news. All these combined effects ultimately extend to participants' change in consumption of information from social media sources. Intuitively, individuals are not only more aware of misinformation, but crowds-out consumption of news from social media because they distrust it more. Last, like the Online sample, those that received fact-check messages tend to share less misinformation.

Finally, similar to prior studies but with greater effectiveness, digital literacy training seems to have a positive effect on increasing participants' ability to identify fake news, as supported by both the Online and the WhatsApp samples. Similarly, misinformation corrections disseminated through WhatsApp messages via a trusted source are effective in getting individuals to reassess their misconceptions and correct related behavior within a few days after receiving the messages (1). Newly, one of our contributions shows that combining debunking, inoculation, and literacy training in a single intervention through WhatsApp messages seems to alter participants' consumption and sharing behaviors.

Future work should focus primarily on increasing the sample size to support these results. As well as on means to extend these findings to other groups, such as less educated individuals or older citizens. Because the Latin American region relies heavily on the use of television to access news, future interventions should also focus on delivering a misinformation course through television, as in Fotini et al. (24) or other means to include such population groups.

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# Acknowledgments

## **Supplementary Materials**

### **Data and code availability**

The replication file with all the data and codes developed by myself using the programming language R in RStudio software are available in the following Github repository: <https://github.com/Manuquinteroc/MisinformatiionBolivia>. This repository includes all the raw data from the surveys, data from social media scraping, post-stratification data, data from Chequea Bolivia, all the codes used for data-wrangling, and statistical analysis to generate all the tables and figures presented in this work.

### **Missing Responses**

Though non-responses were rare, these were treated as the median category of the questions asked. For instance, when responding to the question of how often they question whether a piece of news is false, “Don’t know” responses were coded as “sometimes”. Similarly, “Don’t know” responses were coded as the median value for questions related to likelihood, falsehood, and trust questions (e.g. as “neither likely nor unlikely, “neither false nor true”, and “neither trust nor distrust”).

### **Block Randomization**

To avoid bias and imbalances among treatment conditions, we block-randomized individuals, for each sample separately, by demographics, exposure to misinformation, knowledge to discern and verify misinformation, as well as participants’ position towards the likelihood of false of different news sources. We used the R package `blockTools` to minimize the multivariate Mahalanobis distance, step by step with an Optimal Greedy Algorithm.

## Empirical Specification

The main results presented in this work are from Ordinary Least Square regressions from a Fixed Effect Model. The treatment effects on the main indexes and various outcomes in the Appendix are estimated relative to the Control group using the following specification:

$$Y_{ib} = \alpha_b + \alpha Y_{ib}^{pre} + \beta \mathbf{X}_{ib}^{pre} + \tau_1 \mathbf{T}_{ib} + \tau_2 \mathbf{T}_{ib} \times \mathbb{1}_{\text{WhatsApp}} + \varepsilon_{ib}, \quad (\text{S1})$$

where  $Y_{ib}$  is an outcome of interest for respondent  $i$  from block  $b$ ,  $\alpha_b$  are the randomization block fixed effects of both samples, and  $Y_{ib}^{pre}$  is the analog baseline outcome (if available).  $\mathbf{T}_{ib}$  is the vector of treatment assignments (Course and verification, Course, and Verification),  $\mathbf{X}_{ib}^{pre}$  is the vector of baseline covariates in the outcome family, or the variables selected by LASSO from all baseline variables, and  $\mathbb{1}_{\text{WhatsApp}}$  is an indicator for responses from the sample course delivered via WhatsApp. The parameter of interest  $\tau_1$  captures the average treatment effect for each treatment group in the Online sample and  $\tau_1 + \tau_2$  captures the treatment effect for the WhatsApp sample.

Heteroskedasticity-consistent (HC) standard errors are used throughout. We make use of the  $HC_0$  standard errors (White, 1980) that accounts for heteroskedasticity using the fitted residuals ( $\hat{u}_i^2$ ) from estimating equation S1 with OLS:

$$\Sigma = \text{diag}\{\hat{u}_i^2\}.$$

Throughout, two-sided t-tests of statistical significance are used to evaluate whether the null hypothesis can be rejected, i.e. the effect of the intervention in the treatment groups is no different than the effect on the Control group.

## Supplementary text

Table S1: Details on the content of the course per day and modules

| <b>February</b>                                     | <b>Module / Information delivered</b>       | <b>Link</b>                |
|---|---|----------------------------|
| <b>First module: Introduction to misinformation</b> |   |                            |
| <b>17</b>   | Video                                       | <a href="#">Click here</a> |
| <b>18</b>   | Infographic on fake images                  | <a href="#">Content</a>    |
| <b>19</b>   | infographic on fake videos                  | <a href="#">Content</a>    |
| <b>20</b>   | Infographic on fake audios                  | <a href="#">Content</a>    |
| <b>21</b>   | Infographic on Deep Fakes                   | <a href="#">Content</a>    |
| <b>Second module: Critical thinking and biases</b>  |   |                            |
| <b>22</b>   | Video                                       | <a href="#">Content</a>    |
| <b>23</b>   | Infographic on information consumption      | <a href="#">Content</a>    |
| <b>24</b>   | Infographic on most common biases           | <a href="#">Content</a>    |
| <b>Third module: Fact-Checking</b>                  |   |                            |
| <b>25</b>   | Video                                       | <a href="#">Content</a>    |
| <b>26</b>   | Infographic on characteristics of fake news | <a href="#">Content</a>    |
| <b>27</b>   | Infographic to identify news                | <a href="#">Content</a>    |

# Treatment take-up

Table S2: Summary statistics of Online course

| <b>Panel A: Responded to Baseline sample</b> |                                       |  |                      |
|--|---------------------------------------|--|----------------------|
|  | Completed 50%<br>of the course<br>(1) | Completed 100%<br>of the course<br>(2) | Score<br>(3)         |
| Course and verification                      | 76.388***<br>(4.919)                  | 64.478***<br>(5.201)                   | 58.069***<br>(4.502) |
| Course                                       | 70.930***<br>(5.174)                  | 56.791***<br>(5.784)                   | 50.245***<br>(4.642) |
| Verification                                 | 2.171<br>(1.834)                      | 0.749<br>(2.089)                       | 1.169<br>(1.743)     |
| Course and Verification (p-value)            | 0                                     | 0                                      | 0                    |
| Course (p-value)                             | 0                                     | 0                                      | 0                    |
| Verification (p-value)                       | 0.238                                 | 0.72                                   | 0.503                |
| Control mean                                 | 0                                     | 0                                      | 0                    |
| Outcome range                                | [0, 100]                              | [0, 100]                               | [0, 102.78]          |
| Observations                                 | 310                                   | 310                                    | 310                  |
| R <sup>2</sup>                               | 0.635                                 | 0.501                                  | 0.551                |
| <b>Panel B: Responded to Endline sample</b>  |                                       |  |                      |
| Course and verification                      | 95.542***<br>(3.036)                  | 78.889***<br>(5.499)                   | 72.264***<br>(4.640) |
| Course                                       | 94.060***<br>(4.050)                  | 83.277***<br>(6.044)                   | 72.285***<br>(4.913) |
| Verification                                 | 1.415<br>(1.440)                      | -0.088<br>(2.476)                      | 0.765<br>(1.863)     |
| Course and Verification (p-value)            | 0                                     | 0                                      | 0                    |
| Course (p-value)                             | 0                                     | 0                                      | 0                    |
| Verification (p-value)                       | 0.327                                 | 0.972                                  | 0.682                |
| Control mean                                 | 0                                     | 0                                      | 0                    |
| Outcome range                                | [0, 100]                              | [0, 100]                               | [0, 102.78]          |
| Observations                                 | 205                                   | 205                                    | 205                  |
| R <sup>2</sup>                               | 0.933                                 | 0.778                                  | 0.813                |

*Notes:* We report estimates from OLS regression including randomization block fixed effects. Robust standard errors are in parenthesis. \* denotes  $p < 0.1$ , \*\* denotes  $p < 0.05$ , and \*\*\* denotes  $p < 0.01$ .

Table S3: Respondents that received and interacted with the course’s videos/messages and verifications

| <b>Panel A: Responded to Baseline sample</b> |                                       |                          |  |                               |
|--|---------------------------------------|--------------------------|--|-------------------------------|
|  | Message for<br>the course<br>received | Verification<br>received | Engaged with<br>the course<br>material | Engaged with<br>verifications |
|  | (1)                                   | (2)                      | (3)                                    | (4)                           |
| Course and verification                      | 0.872***<br>(0.062)                   | 0.958***<br>(0.022)      | 0.248***<br>(0.080)                    | 0.093<br>(0.063)              |
| Course                                       | 0.772***<br>(0.073)                   | 0.067***<br>(0.016)      | 0.238***<br>(0.079)                    | -0.041<br>(0.055)             |
| Verification                                 | -0.020<br>(0.059)                     | 0.975***<br>(0.021)      | 0.013<br>(0.070)                       | 0.198***<br>(0.064)           |
| Course and Verification (p-value)            | 0                                     | 0                        | 0.002                                  | 0.137                         |
| Course (p-value)                             | 0                                     | 0                        | 0.003                                  | 0.452                         |
| Verification (p-value)                       | 0.74                                  | 0                        | 0.847                                  | 0.002                         |
| Outcome mean                                 | 0.558                                 | 0.6                      | 0.153                                  | 0.125                         |
| Outcome std. dev.                            | 0.497                                 | 0.491                    | 0.36                                   | 0.331                         |
| Observations                                 | 360                                   | 360                      | 360                                    | 360                           |
| R <sup>2</sup>                               | 0.849                                 | 0.905                    | 0.264                                  | 0.241                         |
| <b>Panel B: Responded to Endline sample</b>  |                                       |                          |  |                               |
| Course and verification                      | 0.925***<br>(0.068)                   | 0.987***<br>(0.026)      | 0.424***<br>(0.124)                    | 0.059<br>(0.097)              |
| Course                                       | 0.785***<br>(0.086)                   | 0.064***<br>(0.022)      | 0.396***<br>(0.127)                    | -0.128<br>(0.086)             |
| Verification                                 | 0.004<br>(0.065)                      | 0.974***<br>(0.028)      | 0.138<br>(0.108)                       | 0.218**<br>(0.089)            |
| Course and Verification (p-value)            | 0                                     | 0                        | 0.001                                  | 0.545                         |
| Course (p-value)                             | 0                                     | 0.005                    | 0.002                                  | 0.139                         |
| Verification (p-value)                       | 0.955                                 | 0                        | 0.204                                  | 0.015                         |
| Outcome mean                                 | 0.602                                 | 0.591                    | 0.183                                  | 0.167                         |
| Outcome std. dev.                            | 0.491                                 | 0.493                    | 0.388                                  | 0.374                         |
| Observations                                 | 186                                   | 186                      | 186                                    | 186                           |
| R <sup>2</sup>                               | 0.873                                 | 0.926                    | 0.297                                  | 0.356                         |

*Notes:* We report estimates from OLS regression including randomization block fixed effects. Robust standard errors are in parenthesis. \* denotes p<0.1, \*\* denotes p<0.05, and \*\*\* denotes p<0.01.

Table S4: Differential attrition

| <b>Panel A: Differential Attrition (OLS)</b>    |                      |
|---|----------------------|
| Differential Attrition                          |                      |
| <b>A.1 Sample course Delivery Online</b>        |                      |
| Course and verification                         | -0.195***<br>(0.070) |
| Course  | -0.334***<br>(0.072) |
| Verification                                    | -0.028<br>(0.069)    |
| Course and Verification (p-value)               | 0.005                |
| Course (p-value)                                | 0                    |
| Verification (p-value)                          | 0.682                |
| $\tau_1 = 0$ (p-value)                          | 0                    |
| <b>A.2 Sample Course Delivery WhatsApp</b>      |                      |
| Course and verification                         | -0.053<br>(0.052)    |
| Course  | -0.043<br>(0.053)    |
| Verification                                    | -0.131**<br>(0.052)  |
| Course and Verification (p-value)               | 0.305                |
| Course (p-value)                                | 0.416                |
| Verification (p-value)                          | 0.011                |
| $\tau_1 + \tau_2 = 0$ (p-value)                 | 0.154                |
| R <sup>2</sup>                                  | 0.267                |
| <b>Panel B: Differential Attrition (IPSW)</b>   |                      |
| <b>Panel B.1: Sample course Delivery Online</b> |                      |
| Course and verification                         | -0.159**<br>(0.077)  |
| Course  | -0.314***<br>(0.077) |
| Verification                                    | -0.001<br>(0.077)    |
| Course and Verification (p-value)               | 0.039                |
| Course (p-value)                                | 0                    |
| Verification (p-value)                          | 0.986                |
| $\tau_1 = 0$ (p-value)                          | 0                    |
| <b>B.2 Sample Course Delivery WhatsApp</b>      |                      |
| Course and verification                         | -0.000<br>(0.058)    |
| Course  | 0.009<br>(0.058)     |
| Verification                                    | -0.093*<br>(0.054)   |
| Course and Verification (p-value)               | 0.997                |
| Course (p-value)                                | 0.873                |
| Verification (p-value)                          | 0.084                |
| $\tau_1 + \tau_2 = 0$ (p-value)                 | 0.168                |
| Control mean                                    | 0.642                |
| Control std. dev.                               | 0.481                |
| Outcome range                                   | [0,1]                |
| Observations                                    | 838                  |
| R <sup>2</sup>                                  | 0.279                |

Notes: We report estimates from OLS regression including randomization block fixed effects. Robust standard errors are in parentheses.  $\tau_1$  is the vector of parameters for the treatment groups in the Online sample, and  $\tau_1 + \tau_2$  captures the effect for the WhatsApp sample as in equation S1. \* denotes  $p < 0.1$ , \*\* denotes  $p < 0.05$ , and \*\*\* denotes  $p < 0.01$ .

# Balance

Table S5: Balance summary on main indexes with and without IPSW

| Panel A: Balance (OLS)                          |                                     |  |                                     |   |                                       |  |  |  |   |                                      |  |
|---|-------------------------------------|--|-------------------------------------|---|---------------------------------------|--|--|--|---|--------------------------------------|--|
|   | Misinformation importance index (1) | Increase likelihood of false of social media sources index (2) | Trust traditional sources index (3) | Distrust social media sources index (4) | Attention to misinformation index (5) | Increase knowledge to identify information index (6) | Increase knowledge to verify information index (7) | Increase consumption behavior of traditional sources index (8) | Decrease consumption behavior of social media sources index (9) | Decrease sharing behavior index (10) | Increase verifying behavior index (11) |
| <b>A.1 Sample course Delivery Online</b>        |                                     |  |                                     |   |                                       |  |  |  |   |                                      |  |
| Course and verification                         | -0.079<br>(0.179)                   | -0.147<br>(0.189)  | -0.496***<br>(0.173)                | 0.186<br>(0.190)                        | -0.126<br>(0.144)                     | -0.322*<br>(0.175)                                   | -0.048<br>(0.172)                                  | -0.135<br>(0.183)  | 0.308*<br>(0.168)   | -0.049<br>(0.181)                    | -0.208<br>(0.177)                      |
| Course  | -0.505**<br>(0.251)                 | -0.377*<br>(0.227)   | -0.387**<br>(0.196)                 | 0.455**<br>(0.205)                      | 0.055<br>(0.184)                      | -0.529**<br>(0.214)                                  | -0.341*<br>(0.187)                                 | -0.072<br>(0.171)  | 0.244<br>(0.223)  | -0.181<br>(0.201)                    | -0.315<br>(0.253)                      |
| Verification                                    | -0.231<br>(0.196)                   | -0.351*<br>(0.196)   | 0.082<br>(0.148)                    | 0.278*<br>(0.165)                       | -0.228*<br>(0.135)                    | -0.146<br>(0.168)                                    | -0.172<br>(0.159)                                  | -0.083<br>(0.166)  | -0.059<br>(0.156)   | 0.079<br>(0.173)                     | -0.234<br>(0.161)                      |
| Course and Verification (p-value)               | 0.658                               | 0.437  | 0.004                               | 0.328                                   | 0.38                                  | 0.067  | 0.78   | 0.462  | 0.067   | 0.789                                | 0.24                                   |
| Course (p-value)                                | 0.045                               | 0.099  | 0.049                               | 0.027                                   | 0.767                                 | 0.014  | 0.069  | 0.676  | 0.275   | 0.369                                | 0.214                                  |
| Verification (p-value)                          | 0.24                                | 0.074  | 0.578                               | 0.093                                   | 0.091                                 | 0.387  | 0.28   | 0.618  | 0.706   | 0.648                                | 0.147                                  |
| $\tau_1 = 0$ (p-value)                          | 0.167                               | 0.21   | 0.024                               | 0.213                                   | 0.273                                 | 0.079  | 0.333  | 0.898  | 0.138   | 0.678                                | 0.398                                  |
| <b>A.2 Sample Course Delivery WhatsApp</b>      |                                     |  |                                     |   |                                       |  |  |  |   |                                      |  |
| Course and verification                         | -0.162<br>(0.147)                   | -0.125<br>(0.131)  | -0.351**<br>(0.177)                 | -0.023<br>(0.166)                       | -0.028<br>(0.082)                     | 0.026<br>(0.140)                                     | 0.140<br>(0.116)                                   | -0.298**<br>(0.120)  | 0.219*<br>(0.122)   | -0.090<br>(0.131)                    | 0.162<br>(0.120)                       |
| Course  | 0.093<br>(0.120)                    | -0.189<br>(0.131)  | -0.190<br>(0.180)                   | -0.183<br>(0.169)                       | -0.075<br>(0.092)                     | -0.030<br>(0.140)                                    | 0.017<br>(0.138)                                   | -0.311**<br>(0.122)  | -0.015<br>(0.117)   | -0.190<br>(0.132)                    | -0.097<br>(0.138)                      |
| Verification                                    | 0.114<br>(0.143)                    | -0.066<br>(0.134)  | -0.047<br>(0.194)                   | -0.089<br>(0.172)                       | 0.038<br>(0.100)                      | 0.390***<br>(0.145)                                  | 0.075<br>(0.144)                                   | -0.263**<br>(0.132)  | -0.132<br>(0.109)   | 0.016<br>(0.134)                     | -0.041<br>(0.125)                      |
| Course and Verification (p-value)               | 0.272                               | 0.342  | 0.048                               | 0.888                                   | 0.736                                 | 0.853  | 0.228  | 0.014  | 0.075   | 0.496                                | 0.177                                  |
| Course (p-value)                                | 0.436                               | 0.149  | 0.29                                | 0.278                                   | 0.414                                 | 0.831  | 0.902  | 0.011  | 0.901   | 0.15                                 | 0.483                                  |
| Verification (p-value)                          | 0.428                               | 0.62   | 0.808                               | 0.605                                   | 0.702                                 | 0.008  | 0.604  | 0.048  | 0.227   | 0.907                                | 0.743                                  |
| $\tau_1 + \tau_2 = 0$ (p-value)                 | 0.549                               | 0.797  | 0.316                               | 0.801                                   | 0.896                                 | 0.156  | 0.848  | 0.212  | 0.255   | 0.68                                 | 0.541                                  |
| Control mean                                    | 0.099                               | 0.102  | 0.12                                | -0.059                                  | 3.928                                 | 0.035  | 0.002  | 0.128  | -0.11   | -0.02                                | 0.029                                  |
| Control std. dev.                               | 0.82                                | 0.958  | 0.931                               | 1.016                                   | 0.751                                 | 1.02   | 0.993  | 0.986  | 0.994   | 1.017                                | 0.996                                  |
| Outcome range                                   | [-4.0,8]                            | [-2.8,1.2]   | [-2.6,2.1]                          | [-3.1,8]                                | [1,5]                                 | [-3.3,2.4]   | [-3.1,2.5]   | [-3.2,1.8]   | [-1.4,3.8]  | [-3.2,1]                             | [-3.4,1.1]                             |
| Observations                                    | 463                                 | 463  | 463                                 | 463                                     | 463                                   | 463  | 463  | 463  | 463   | 463                                  | 463                                    |
| R <sup>2</sup>                                  | 0.302                               | 0.366  | 0.302                               | 0.345                                   | 0.473                                 | 0.408  | 0.503  | 0.510  | 0.519   | 0.461                                | 0.443                                  |
| <b>Panel B: Balance (IPSW)</b>                  |                                     |  |                                     |   |                                       |  |  |  |   |                                      |  |
| <b>Panel B.1: Sample course Delivery Online</b> |                                     |  |                                     |   |                                       |  |  |  |   |                                      |  |
| Course and verification                         | -0.029<br>(0.150)                   | -0.196<br>(0.163)  | 0.039<br>(0.162)                    | -0.106<br>(0.167)                       | 0.021<br>(0.142)                      | 0.083<br>(0.156)                                     | 0.038<br>(0.142)                                   | 0.080<br>(0.153)   | 0.014<br>(0.131)  | 0.073<br>(0.153)                     | 0.144<br>(0.184)                       |
| Course  | -0.242<br>(0.171)                   | -0.328**<br>(0.153)  | -0.224<br>(0.153)                   | 0.110<br>(0.161)                        | 0.106<br>(0.135)                      | 0.165<br>(0.155)                                     | -0.149<br>(0.140)                                  | 0.118<br>(0.142)   | -0.140<br>(0.141)   | 0.093<br>(0.149)                     | 0.155<br>(0.176)                       |
| Verification                                    | -0.247<br>(0.181)                   | -0.276*<br>(0.162)   | 0.206<br>(0.155)                    | -0.168<br>(0.168)                       | -0.169<br>(0.141)                     | 0.120<br>(0.157)                                     | -0.061<br>(0.146)                                  | 0.164<br>(0.150)   | -0.219<br>(0.138)   | 0.129<br>(0.154)                     | -0.112<br>(0.176)                      |
| Course and Verification (p-value)               | 0.846                               | 0.232  | 0.812                               | 0.524                                   | 0.881                                 | 0.592  | 0.791  | 0.601  | 0.912   | 0.633                                | 0.433                                  |
| Course (p-value)                                | 0.158                               | 0.033  | 0.144                               | 0.495                                   | 0.432                                 | 0.286  | 0.287  | 0.406  | 0.324   | 0.531                                | 0.377                                  |
| Verification (p-value)                          | 0.173                               | 0.09   | 0.185                               | 0.319                                   | 0.23                                  | 0.444  | 0.675  | 0.273  | 0.113   | 0.401                                | 0.527                                  |
| $\tau_1 = 0$ (p-value)                          | 0.352                               | 0.234  | 0.126                               | 0.416                                   | 0.246                                 | 0.823  | 0.648  | 0.782  | 0.414   | 0.907                                | 0.381                                  |
| <b>B.2 Sample Course Delivery WhatsApp</b>      |                                     |  |                                     |   |                                       |  |  |  |   |                                      |  |
| Course and verification                         | -0.083<br>(0.119)                   | -0.003<br>(0.111)  | 0.015<br>(0.120)                    | 0.025<br>(0.119)                        | 0.047<br>(0.088)                      | 0.063<br>(0.118)                                     | 0.307***<br>(0.108)                                | 0.145<br>(0.103)   | 0.087<br>(0.105)  | -0.112<br>(0.112)                    | 0.109<br>(0.113)                       |
| Course  | 0.038<br>(0.120)                    | 0.000<br>(0.112)   | 0.158<br>(0.121)                    | 0.002<br>(0.119)                        | -0.069<br>(0.089)                     | 0.114<br>(0.119)                                     | 0.187*<br>(0.109)                                  | 0.205**<br>(0.104)   | 0.151<br>(0.105)  | -0.257**<br>(0.113)                  | 0.057<br>(0.113)                       |
| Verification                                    | 0.037<br>(0.111)                    | -0.083<br>(0.103)  | 0.038<br>(0.112)                    | 0.150<br>(0.111)                        | -0.062<br>(0.082)                     | 0.074<br>(0.110)                                     | 0.232**<br>(0.101)                                 | 0.141<br>(0.096)   | 0.088<br>(0.098)  | 0.031<br>(0.105)                     | -0.059<br>(0.105)                      |
| Course and Verification (p-value)               | 0.486                               | 0.976  | 0.903                               | 0.834                                   | 0.599                                 | 0.592  | 0.005  | 0.158  | 0.404   | 0.319                                | 0.333                                  |
| Course (p-value)                                | 0.753                               | 0.998  | 0.191                               | 0.987                                   | 0.438                                 | 0.34   | 0.087  | 0.048  | 0.151   | 0.023                                | 0.617                                  |
| Verification (p-value)                          | 0.742                               | 0.422  | 0.734                               | 0.176                                   | 0.456                                 | 0.506  | 0.022  | 0.142  | 0.37  | 0.767                                | 0.577                                  |
| $\tau_1 + \tau_2 = 0$ (p-value)                 | 0.707                               | 0.803  | 0.552                               | 0.455                                   | 0.498                                 | 0.813  | 0.031  | 0.232  | 0.551   | 0.038                                | 0.431                                  |
| Control mean                                    | -0.069                              | -0.074   | 0.046                               | -0.07                                   | 3.916                                 | -0.11  | -0.052   | 0.158  | -0.19   | -0.026                               | 0.002                                  |
| Control std. dev.                               | 1.091                               | 0.992  | 0.971                               | 0.941                                   | 0.787                                 | 0.972  | 0.935  | 0.938  | 0.884   | 0.933                                | 0.953                                  |
| Outcome range                                   | [-3.8,0.6]                          | [-2.7,1.3]   | [-2.5,2.1]                          | [-3.1,8]                                | [1,5]                                 | [-3.4,2.5]   | [-3.2,6]   | [-2.9,1.7]   | [-1.4,3.8]  | [-3.5,2.1]                           | [-3.3,1.1]                             |
| Observations                                    | 838                                 | 838  | 838                                 | 838                                     | 838                                   | 838  | 838  | 838  | 838   | 838                                  | 838                                    |
| R <sup>2</sup>                                  | 0.248                               | 0.358  | 0.242                               | 0.232                                   | 0.315                                 | 0.278  | 0.373  | 0.468  | 0.412   | 0.324                                | 0.344                                  |

Notes: We report estimates from OLS regression including randomization block fixed effects. Robust standard errors are in parentheses.  $\tau_1$  is the vector of parameters for the treatment groups in the Online sample, and  $\tau_1 + \tau_2$  captures the effect for the WhatsApp sample as in equation S1. \* denotes  $p < 0.1$ , \*\* denotes  $p < 0.05$ , and \*\*\* denotes  $p < 0.01$ .

Table S6: Balance on demographic variables

|  | Age               | Gender (female)   | Level of education | Journalist        |
|--|-------------------|-------------------|--------------------|-------------------|
|  | (1)               | (2)               | (3)                | (4)               |
| <b>A.1 Sample course Delivery Online</b>   |                   |                   |                    |                   |
| Course and verification                    | -1.269<br>(0.902) | 0.053<br>(0.044)  | -0.318*<br>(0.187) | 0.044<br>(0.074)  |
| Course                                     | -1.039<br>(0.877) | -0.017<br>(0.059) | -0.129<br>(0.217)  | -0.048<br>(0.065) |
| Verification                               | -0.426<br>(0.748) | 0.080*<br>(0.048) | -0.163<br>(0.174)  | -0.031<br>(0.058) |
| Course and Verification (p-value)          | 0.16              | 0.225             | 0.09               | 0.552             |
| Course (p-value)                           | 0.237             | 0.772             | 0.553              | 0.456             |
| Verification (p-value)                     | 0.569             | 0.092             | 0.349              | 0.596             |
| $\tau_1 = 0$ (p-value)                     | 0.876             | 0.099             | 0.653              | 0.672             |
| <b>A.2 Sample Course Delivery WhatsApp</b> |                   |                   |                    |                   |
| Course and verification                    | -1.629<br>(1.579) | -0.006<br>(0.038) | -0.310<br>(0.234)  | -0.019<br>(0.066) |
| Course                                     | 1.314<br>(1.610)  | -0.003<br>(0.039) | -0.203<br>(0.238)  | -0.034<br>(0.068) |
| Verification                               | 0.795<br>(1.702)  | -0.003<br>(0.041) | -0.002<br>(0.252)  | 0.005<br>(0.072)  |
| Course and Verification (p-value)          | 0.303             | 0.869             | 0.186              | 0.779             |
| Course (p-value)                           | 0.415             | 0.938             | 0.396              | 0.621             |
| Verification (p-value)                     | 0.641             | 0.941             | 0.992              | 0.943             |
| $\tau_1 + \tau_2 = 0$ (p-value)            | 0.299             | 0.999             | 0.494              | 0.946             |
| Control mean                               | 30.594            | 0.529             | 8.833              | 0.268             |
| Control std. dev.                          | 9.761             | 0.501             | 1.396              | 0.445             |
| Outcome range                              | [18,76]           | [0,1]             | [2,11]             | [0,1]             |
| Observations                               | 463               | 463               | 463                | 463               |
| R <sup>2</sup>                             | 0.587             | 0.898             | 0.528              | 0.594             |

*Notes:* We report estimates from OLS regression including randomization block fixed effects. Robust standard errors are in parentheses.  $\tau_1$  is the vector of parameters for the treatment groups in the Online sample, and  $\tau_1 + \tau_2$  captures the effect for the WhatsApp sample as in equation S1. \* denotes  $p < 0.1$ , \*\* denotes  $p < 0.05$ , and \*\*\* denotes  $p < 0.01$ .

Table S7: Balance on mechanisms: Misinformation relevance and falsehood

|  | Misinformation<br>importance<br>index<br>of (1,1,1,1<br>1,1,1)<br>(1) | Decisions that<br>may affect<br>health<br>(2) | Election of<br>candidates who<br>do not represent<br>the interests of<br>citizens<br>(3) | To falsely<br>discredit or<br>glorify<br>people<br>(4) | Ideological<br>polarization<br>(5) | Violence<br>towards certain<br>people<br>or groups in<br>society<br>(6) | Increase<br>hatred towards<br>certain people<br>or groups in<br>society<br>(7) | Increase<br>likelihood of<br>false of<br>social media<br>sources<br>index<br>of (1,1)<br>(8) | Believe<br>scenario 1<br>is fake <sup>†</sup><br>(9) | Believe<br>scenario 3<br>is fake <sup>††</sup><br>(10) |
|--|---|---|--|--|------------------------------------|---|--|--|--|--|
| <b>A.1 Sample course Delivery Online</b>   |   |   |  |  |                                    |   |  |  |  |  |
| Course and verification                    | -0.079<br>(0.179)   | 0.036<br>(0.204)                              | -0.323*<br>(0.192)   | -0.045<br>(0.184)                                      | 0.070<br>(0.163)                   | 0.007<br>(0.182)  | 0.023<br>(0.211)   | -0.147<br>(0.189)  | -0.185<br>(0.235)                                    | -0.110<br>(0.208)                                      |
| Course                                     | -0.505**<br>(0.251)   | -0.402<br>(0.271)                             | -0.361<br>(0.227)  | -0.416*<br>(0.247)                                     | -0.510**<br>(0.256)                | -0.461**<br>(0.235)   | -0.300<br>(0.237)  | -0.377*<br>(0.227)   | -0.370<br>(0.254)                                    | -0.382<br>(0.271)                                      |
| Verification                               | -0.231<br>(0.196)   | -0.155<br>(0.205)                             | -0.095<br>(0.180)  | -0.322*<br>(0.188)                                     | -0.208<br>(0.194)                  | -0.337*<br>(0.185)  | -0.303<br>(0.198)  | -0.351*<br>(0.196)   | -0.251<br>(0.232)                                    | -0.449**<br>(0.214)                                    |
| Course and Verification (p-value)          | 0.658   | 0.86  | 0.094  | 0.805  | 0.668                              | 0.969   | 0.913  | 0.437  | 0.432  | 0.599  |
| Course (p-value)                           | 0.045   | 0.139   | 0.114  | 0.093  | 0.047                              | 0.051   | 0.206  | 0.099  | 0.146  | 0.16   |
| Verification (p-value)                     | 0.24  | 0.45  | 0.598  | 0.089  | 0.285                              | 0.069   | 0.127  | 0.074  | 0.281  | 0.037  |
| $\tau_1 = 0$ (p-value)                     | 0.167   | 0.314   | 0.301  | 0.173  | 0.084                              | 0.1   | 0.297  | 0.21   | 0.522  | 0.219  |
| <b>A.2 Sample Course Delivery WhatsApp</b> |   |   |  |  |                                    |   |  |  |  |  |
| Course and verification                    | -0.162<br>(0.201)   | -0.028<br>(0.209)                             | -0.241<br>(0.201)  | -0.164<br>(0.198)                                      | -0.212<br>(0.200)                  | -0.055<br>(0.201)   | -0.111<br>(0.207)  | -0.125<br>(0.192)  | 0.020<br>(0.231)                                     | -0.267<br>(0.236)                                      |
| Course                                     | 0.093<br>(0.205)  | 0.296<br>(0.213)                              | -0.072<br>(0.205)  | -0.045<br>(0.202)                                      | 0.025<br>(0.203)                   | 0.119<br>(0.205)  | 0.043<br>(0.211)   | -0.189<br>(0.196)  | -0.136<br>(0.235)                                    | -0.240<br>(0.240)                                      |
| Verification                               | 0.114<br>(0.217)  | 0.036<br>(0.225)                              | 0.168<br>(0.216)   | 0.178<br>(0.213)                                       | 0.005<br>(0.215)                   | 0.144<br>(0.217)  | 0.145<br>(0.223)   | -0.066<br>(0.207)  | -0.099<br>(0.249)                                    | -0.034<br>(0.254)                                      |
| Course and Verification (p-value)          | 0.423   | 0.892   | 0.232  | 0.407  | 0.289                              | 0.785   | 0.591  | 0.516  | 0.932  | 0.257  |
| Course (p-value)                           | 0.649   | 0.165   | 0.725  | 0.825  | 0.903                              | 0.562   | 0.839  | 0.335  | 0.562  | 0.318  |
| Verification (p-value)                     | 0.601   | 0.874   | 0.437  | 0.403  | 0.982                              | 0.509   | 0.517  | 0.748  | 0.691  | 0.893  |
| $\tau_1 + \tau_2 = 0$ (p-value)            | 0.549   | 0.426   | 0.303  | 0.463  | 0.621                              | 0.756   | 0.718  | 0.797  | 0.897  | 0.591  |
| Control mean                               | 0.099   | 4.406   | 4.514  | 4.732  | 4.601                              | 4.623   | 4.638  | 4.102  | 3.913  | 3.87   |
| Control std. dev.                          | 0.82  | 0.917   | 0.938  | 0.76   | 0.909                              | 0.873   | 0.854  | 0.958  | 1.229  | 1.145  |
| Outcome range                              | [-4,0.8]  | [1,5]   | [1,5]  | [1,5]  | [1,5]                              | [1,5]   | [1,5]  | [-2.8,1.2]   | [1,5]  | [1,5]  |
| Observations                               | 463   | 463   | 463  | 463  | 463                                | 463   | 463  | 463  | 463  | 463  |
| R <sup>2</sup>                             | 0.302   | 0.302   | 0.341  | 0.313  | 0.363                              | 0.330   | 0.279  | 0.366  | 0.396  | 0.360  |

Notes: We report estimates from OLS regression including randomization block fixed effects. Robust standard errors are in parentheses.  $\tau_1$  is the vector of parameters for the treatment groups in the Online sample, and  $\tau_1 + \tau_2$  captures the effect for the WhatsApp sample as in equation S1. †: imagine you received an audio that came to you on WhatsApp with a screenshot of the Twitter account of a well-known person saying something very controversial. ††: imagine you received an audio that came to you by WhatsApp reporting evidence of corruption of a politician that you already suspected and you did not like. \* denotes  $p < 0.1$ , \*\* denotes  $p < 0.05$ , and \*\*\* denotes  $p < 0.01$ .

Table S8: Balance on mechanisms: Trust and attention

|  | Trust<br>traditional<br>sources<br>index<br>of (1,1,1) | Radio / TV        | Newspaper            | Internet            | Distrust<br>social media<br>sources<br>index<br>of (-1,-1,-1) | WhatsApp          | Social media        | Conversations     | Attention to<br>misinformation<br>index<br>of (1) | How often<br>do you question<br>wether a<br>news is false |
|--|--|-------------------|----------------------|---------------------|---|-------------------|---------------------|-------------------|---|---|
|  | (1)  | (2)               | (3)                  | (4)                 | (5)   | (6)               | (7)                 | (8)               | (9)   | (10)  |
| <b>A.1 Sample course Delivery Online</b>   |  |                   |                      |                     |   |                   |                     |                   |   |   |
| Course and verification                    | -0.496***<br>(0.173)                                   | -0.255<br>(0.207) | -0.610***<br>(0.187) | -0.438**<br>(0.206) | 0.186<br>(0.190)  | 0.044<br>(0.204)  | -0.149<br>(0.214)   | -0.298<br>(0.214) | 0.120<br>(0.205)                                  | 0.098<br>(0.166)  |
| Course                                     | -0.387**<br>(0.196)                                    | -0.308<br>(0.245) | -0.450*<br>(0.239)   | -0.276<br>(0.216)   | 0.455**<br>(0.205)  | -0.247<br>(0.214) | -0.495**<br>(0.246) | -0.359<br>(0.229) | 0.148<br>(0.188)                                  | 0.120<br>(0.152)  |
| Verification                               | 0.082<br>(0.148)                                       | 0.124<br>(0.183)  | 0.144<br>(0.147)     | -0.013<br>(0.197)   | 0.278*<br>(0.165)   | -0.180<br>(0.181) | -0.200<br>(0.192)   | -0.297<br>(0.198) | 0.084<br>(0.182)                                  | 0.068<br>(0.147)  |
| Course and Verification (p-value)          | 0.004  | 0.22              | 0.001                | 0.035               | 0.328   | 0.83              | 0.487               | 0.164             | 0.557   | 0.557   |
| Course (p-value)                           | 0.049  | 0.21              | 0.06                 | 0.203               | 0.027   | 0.249             | 0.045               | 0.118             | 0.43  | 0.43  |
| Verification (p-value)                     | 0.578  | 0.498             | 0.33                 | 0.948               | 0.093   | 0.32              | 0.297               | 0.134             | 0.643   | 0.643   |
| $\tau_1 = 0$ (p-value)                     | 0.024  | 0.336             | 0.006                | 0.228               | 0.213   | 0.58              | 0.297               | 0.347             | 0.89  | 0.89  |
| <b>A.2 Sample Course Delivery WhatsApp</b> |  |                   |                      |                     |   |                   |                     |                   |   |   |
| Course and verification                    | -0.351*<br>(0.201)                                     | -0.325<br>(0.237) | -0.417*<br>(0.219)   | -0.212<br>(0.227)   | -0.023<br>(0.195)   | 0.149<br>(0.209)  | 0.094<br>(0.222)    | -0.141<br>(0.210) | 0.251<br>(0.185)                                  | 0.203<br>(0.150)  |
| Course                                     | -0.190<br>(0.205)                                      | -0.162<br>(0.242) | -0.246<br>(0.224)    | -0.114<br>(0.232)   | -0.183<br>(0.199)   | 0.109<br>(0.213)  | 0.164<br>(0.227)    | 0.172<br>(0.214)  | 0.074<br>(0.189)                                  | 0.060<br>(0.153)  |
| Verification                               | -0.047<br>(0.217)                                      | 0.102<br>(0.256)  | -0.111<br>(0.237)    | -0.104<br>(0.245)   | -0.089<br>(0.210)   | -0.065<br>(0.226) | 0.248<br>(0.240)    | 0.003<br>(0.226)  | 0.121<br>(0.200)                                  | 0.098<br>(0.162)  |
| Course and Verification (p-value)          | 0.082  | 0.172             | 0.058                | 0.352               | 0.905   | 0.476             | 0.673               | 0.501             | 0.177   | 0.177   |
| Course (p-value)                           | 0.354  | 0.505             | 0.274                | 0.623               | 0.357   | 0.61              | 0.47                | 0.422             | 0.694   | 0.694   |
| Verification (p-value)                     | 0.828  | 0.691             | 0.639                | 0.672               | 0.672   | 0.775             | 0.301               | 0.989             | 0.544   | 0.544   |
| $\tau_1 + \tau_2 = 0$ (p-value)            | 0.316  | 0.35              | 0.271                | 0.832               | 0.801   | 0.768             | 0.754               | 0.558             | 0.591   | 0.591   |
| Control mean                               | 0.12   | 3.645             | 3.957                | 2.746               | -0.059  | 2.072             | 2.5                 | 2.942             | -0.11   | 3.812   |
| Control std. dev.                          | 0.931  | 1.113             | 1.052                | 1.184               | 1.016   | 1.118             | 1.116               | 1.151             | 1.081   | 0.876   |
| Outcome range                              | [-2.6,2.1]   | [1,5]             | [1,5]                | [1,5]               | [-3,1.8]  | [1,5]             | [1,5]               | [1,5]             | [-3.6,1.4]  | [1,5]   |
| Observations                               | 463  | 463               | 463                  | 463                 | 463   | 463               | 463                 | 463               | 463   | 463   |
| R <sup>2</sup>                             | 0.302  | 0.274             | 0.329                | 0.349               | 0.345   | 0.368             | 0.292               | 0.357             | 0.409   | 0.409   |

Notes: We report estimates from OLS regression including randomization block fixed effects. Robust standard errors are in parentheses.  $\tau_1$  is the vector of parameters for the treatment groups in the Online sample, and  $\tau_1 + \tau_2$  captures the effect for the WhatsApp sample as in equation S1. \* denotes  $p < 0.1$ , \*\* denotes  $p < 0.05$ , and \*\*\* denotes  $p < 0.01$ .

Table S9: Balance on knowledge to identify information

|  | Increase<br>knowledge to<br>identify<br>information<br>index<br>of (1,1,1,1,<br>1,1,-1,-1,-1) | How much<br>knowledge do you<br>have to identify<br>whether a news is<br>false or not? | Knowing how<br>to identify<br>a fake new<br>index | Radio / TV        | Newspaper          | Internet           | WhatsApp            | Social media      | Conversations       |
|--|---|--|---|-------------------|--------------------|--------------------|---------------------|-------------------|---------------------|
|  | (1)   | (2)  | (3)   | (4)               | (5)                | (6)                | (7)                 | (8)               | (9)                 |
| <b>A.1 Sample course Delivery Online</b>   |   |  |   |                   |                    |                    |                     |                   |                     |
| Course and verification                    | -0.322*<br>(0.175)  | -0.138<br>(0.138)  | 0.067<br>(0.052)                                  | 0.104<br>(0.065)  | 0.030<br>(0.065)   | 0.179**<br>(0.091) | -0.014<br>(0.065)   | -0.083<br>(0.063) | 0.044<br>(0.091)    |
| Course                                     | -0.529**<br>(0.214)   | -0.074<br>(0.160)  | 0.001<br>(0.057)                                  | 0.146*<br>(0.079) | 0.215**<br>(0.085) | 0.128<br>(0.099)   | -0.177**<br>(0.090) | -0.097<br>(0.069) | -0.00002<br>(0.101) |
| Verification                               | -0.146<br>(0.168)   | 0.015<br>(0.127)   | -0.060<br>(0.049)                                 | -0.012<br>(0.054) | 0.005<br>(0.052)   | -0.006<br>(0.085)  | -0.139*<br>(0.071)  | -0.003<br>(0.052) | -0.086<br>(0.084)   |
| Course and Verification (p-value)          | 0.067   | 0.321  | 0.196   | 0.112             | 0.646              | 0.049              | 0.832               | 0.189             | 0.626               |
| Course (p-value)                           | 0.014   | 0.645  | 0.992   | 0.067             | 0.012              | 0.199              | 0.049               | 0.165             | 1                   |
| Verification (p-value)                     | 0.387   | 0.904  | 0.223   | 0.82              | 0.93               | 0.943              | 0.051               | 0.952             | 0.307               |
| $\tau_1 = 0$ (p-value)                     | 0.079   | 0.756  | 0.232   | 0.121             | 0.036              | 0.198              | 0.059               | 0.259             | 0.601               |
| <b>A.2 Sample Course Delivery WhatsApp</b> |   |  |   |                   |                    |                    |                     |                   |                     |
| Course and verification                    | 0.026<br>(0.185)  | 0.103<br>(0.144)   | 0.021<br>(0.056)                                  | 0.028<br>(0.068)  | 0.006<br>(0.067)   | 0.038<br>(0.095)   | 0.012<br>(0.070)    | 0.035<br>(0.055)  | -0.019<br>(0.090)   |
| Course                                     | -0.030<br>(0.189)   | 0.025<br>(0.146)   | -0.064<br>(0.057)                                 | -0.062<br>(0.069) | -0.130*<br>(0.069) | 0.045<br>(0.097)   | -0.021<br>(0.071)   | -0.011<br>(0.056) | -0.035<br>(0.092)   |
| Verification                               | 0.390*<br>(0.200)   | 0.242<br>(0.155)   | -0.006<br>(0.060)                                 | -0.087<br>(0.073) | -0.066<br>(0.072)  | -0.060<br>(0.102)  | 0.100<br>(0.075)    | 0.089<br>(0.059)  | 0.037<br>(0.097)    |
| Course and Verification (p-value)          | 0.889   | 0.474  | 0.713   | 0.682             | 0.925              | 0.687              | 0.861               | 0.53              | 0.834               |
| Course (p-value)                           | 0.875   | 0.867  | 0.258   | 0.366             | 0.058              | 0.641              | 0.766               | 0.839             | 0.706               |
| Verification (p-value)                     | 0.052   | 0.119  | 0.916   | 0.231             | 0.36               | 0.559              | 0.185               | 0.133             | 0.703               |
| $\tau_1 + \tau_2 = 0$ (p-value)            | 0.156   | 0.422  | 0.503   | 0.35              | 0.166              | 0.745              | 0.436               | 0.356             | 0.904               |
| Control mean                               | 0.035   | 3.116  | 0.374   | 0.159             | 0.152              | 0.609              | 0.862               | 0.899             | 0.63                |
| Control std. dev.                          | 1.02  | 0.855  | 0.298   | 0.367             | 0.36               | 0.49               | 0.346               | 0.303             | 0.484               |
| Outcome range                              | [-3.3,2.4]  | [1,5]  | [-0.4,1]  | [0,1]             | [0,1]              | [0,1]              | [0,1]               | [0,1]             | [0,1]               |
| Observations                               | 463   | 463  | 463   | 463               | 463                | 463                | 463                 | 463               | 463                 |
| R <sup>2</sup>                             | 0.408   | 0.516  | 0.414   | 0.366             | 0.364              | 0.308              | 0.373               | 0.369             | 0.412               |

Notes: We report estimates from OLS regression including randomization block fixed effects. Robust standard errors are in parentheses.  $\tau_1$  is the vector of parameters for the treatment groups in the Online sample, and  $\tau_1 + \tau_2$  captures the effect for the WhatsApp sample as in equation S1. \* denotes  $p < 0.1$ , \*\* denotes  $p < 0.05$ , and \*\*\* denotes  $p < 0.01$ .

Table S10: Balance on knowledge to verify information and consumption behavior

|  | Increase knowledge to verify information index of (1,1,1) | How much knowledge do you have to verify if a doubtful news is false or not? | Main ways to verify news index | How many verifiers or fact-checkers do you know? | Increase consumption behavior of traditional sources index of (1,1,1) | Radio / TV        | Newspaper            | Internet          | Decrease consumption behavior of social media sources index of (-1,-1,-1) | WhatsApp          | Social media       |
|--|---|--|--------------------------------|--|---|-------------------|----------------------|-------------------|---|-------------------|--------------------|
|  | (1)   | (2)  | (3)                            | (4)  | (5)   | (6)               | (7)                  | (8)               | (9)   | (10)              | (11)               |
| <b>A.1 Sample course Delivery Online</b>   |   |  |                                |  |   |                   |                      |                   |   |                   |                    |
| Course and verification                    | -0.048<br>(0.172)   | -0.068<br>(0.122)  | -0.052<br>(0.070)              | 0.179<br>(0.214)                                 | 0.135<br>(0.199)  | -0.123<br>(0.240) | -0.086<br>(0.245)    | -0.195<br>(0.299) | -0.449<br>(0.295)   | -0.055<br>(0.171) | -0.511*<br>(0.275) |
| Course                                     | -0.341*<br>(0.187)  | -0.136<br>(0.140)  | -0.119*<br>(0.072)             | -0.182<br>(0.230)                                | 0.121<br>(0.238)  | 0.197<br>(0.260)  | -0.035<br>(0.293)    | -0.342<br>(0.264) | -0.093<br>(0.328)   | -0.212<br>(0.203) | -0.363<br>(0.336)  |
| Verification                               | -0.172<br>(0.159)   | -0.084<br>(0.123)  | -0.071<br>(0.058)              | -0.029<br>(0.186)                                | -0.131<br>(0.187)   | -0.396<br>(0.251) | 0.097<br>(0.233)     | 0.006<br>(0.268)  | 0.486*<br>(0.290)   | -0.121<br>(0.157) | -0.009<br>(0.215)  |
| Course and Verification (p-value)          | 0.78  | 0.577  | 0.457                          | 0.404  | 0.496   | 0.608             | 0.726                | 0.515             | 0.129   | 0.75              | 0.065              |
| Course (p-value)                           | 0.069   | 0.333  | 0.1                            | 0.429  | 0.612   | 0.449             | 0.904                | 0.196             | 0.778   | 0.297             | 0.281              |
| Verification (p-value)                     | 0.28  | 0.494  | 0.226                          | 0.876  | 0.485   | 0.116             | 0.678                | 0.982             | 0.094   | 0.442             | 0.967              |
| $\tau_1 = 0$ (p-value)                     | 0.333   | 0.844  | 0.475                          | 0.563  | 0.589   | 0.264             | 0.94                 | 0.658             | 0.057   | 0.749             | 0.157              |
| <b>A.2 Sample Course Delivery WhatsApp</b> |   |  |                                |  |   |                   |                      |                   |   |                   |                    |
| Course and verification                    | 0.140<br>(0.170)  | 0.121<br>(0.137)   | 0.064<br>(0.068)               | -0.074<br>(0.203)                                | -0.063<br>(0.194)   | -0.038<br>(0.259) | -0.631**<br>(0.271)  | -0.187<br>(0.273) | -0.268<br>(0.311)   | -0.222<br>(0.175) | -0.149<br>(0.248)  |
| Course                                     | 0.017<br>(0.173)  | -0.024<br>(0.140)  | 0.002<br>(0.069)               | 0.065<br>(0.207)                                 | -0.268<br>(0.198)   | -0.006<br>(0.264) | -0.745***<br>(0.277) | -0.136<br>(0.279) | -0.100<br>(0.317)   | -0.148<br>(0.179) | 0.315<br>(0.253)   |
| Verification                               | 0.075<br>(0.183)  | 0.150<br>(0.148)   | 0.022<br>(0.073)               | -0.111<br>(0.219)                                | -0.338<br>(0.209)   | -0.357<br>(0.279) | -0.536*<br>(0.292)   | 0.095<br>(0.294)  | 0.118<br>(0.335)  | 0.095<br>(0.189)  | 0.175<br>(0.268)   |
| Course and Verification (p-value)          | 0.411   | 0.38   | 0.347                          | 0.716  | 0.748   | 0.883             | 0.021                | 0.493             | 0.389   | 0.205             | 0.55               |
| Course (p-value)                           | 0.922   | 0.866  | 0.972                          | 0.754  | 0.177   | 0.983             | 0.007                | 0.626             | 0.753   | 0.407             | 0.214              |
| Verification (p-value)                     | 0.684   | 0.311  | 0.767                          | 0.612  | 0.108   | 0.201             | 0.068                | 0.748             | 0.725   | 0.615             | 0.513              |
| $\tau_1 + \tau_2 = 0$ (p-value)            | 0.848   | 0.563  | 0.776                          | 0.861  | 0.298   | 0.557             | 0.033                | 0.77              | 0.693   | 0.329             | 0.298              |
| Control mean                               | 0.002   | 3.109  | 0.57                           | 1.21   | 0.008   | 4.428             | 4.536                | 4.094             | 4.188   | 5.355             | 4.355              |
| Control std. dev.                          | 0.993   | 0.799  | 0.349                          | 1.13   | 0.988   | 1.464             | 1.446                | 1.474             | 1.774   | 0.965             | 1.328              |
| Outcome range                              | [-3.1,2.5]  | [1,5]  | [-0.3,1]                       | [0,3]  | [-3.1,3.6]  | [1,6]             | [1,6]                | [1,6]             | [1,6]   | [1,6]             | [1,6]              |
| Observations                               | 463   | 463  | 463                            | 463  | 463   | 463               | 463                  | 463               | 463   | 463               | 463                |
| R <sup>2</sup>                             | 0.503   | 0.530  | 0.306                          | 0.454  | 0.349   | 0.429             | 0.404                | 0.424             | 0.457   | 0.494             | 0.412              |

Notes: We report estimates from OLS regression including randomization block fixed effects. Robust standard errors are in parentheses.  $\tau_1$  is the vector of parameters for the treatment groups in the Online sample, and  $\tau_1 + \tau_2$  captures the effect for the WhatsApp sample as in equation S1. \* denotes  $p < 0.1$ , \*\* denotes  $p < 0.05$ , and \*\*\* denotes  $p < 0.01$ .

Table S11: Balance on sharing and verifying behavior

|  | Decrease<br>sharing<br>behavior index<br>of (1,-1,<br>-1,-1)<br>(1) | If you know a<br>story is false,<br>how often do you<br>share its falsehood<br>with others<br>on social media?<br>(2) | Share<br>scenario 1<br>withoout verification <sup>†</sup><br>(3) | Share<br>scenario 3<br>withoout verification <sup>††</sup><br>(4) | Increase<br>verifying<br>behavior<br>index<br>of (1)<br>(5) | How often do<br>you verify news<br>that you doubt may<br>be false before<br>sharing it?<br>(6) |
|--|---|---|--|---|---|--|
| <b>A.1 Sample course Delivery Online</b>   |   |   |  |   |   |  |
| Course and verification                    | -0.049<br>(0.181)   | -0.012<br>(0.215)   | 0.148<br>(0.196)   | -0.065<br>(0.209)   | 0.030<br>(0.194)  | 0.028<br>(0.180)   |
| Course                                     | -0.181<br>(0.201)   | -0.342<br>(0.235)   | -0.076<br>(0.204)  | 0.046<br>(0.282)  | 0.070<br>(0.205)  | 0.065<br>(0.190)   |
| Verification                               | 0.079<br>(0.173)  | 0.361*<br>(0.203)   | 0.105<br>(0.177)   | 0.208<br>(0.217)  | -0.128<br>(0.196)   | -0.119<br>(0.183)  |
| Course and Verification (p-value)          | 0.789   | 0.956   | 0.449  | 0.756   | 0.879   | 0.879  |
| Course (p-value)                           | 0.369   | 0.146   | 0.712  | 0.872   | 0.733   | 0.733  |
| Verification (p-value)                     | 0.648   | 0.077   | 0.556  | 0.337   | 0.516   | 0.516  |
| $\tau_1 = 0$ (p-value)                     | 0.678   | 0.086   | 0.781  | 0.719   | 0.827   | 0.827  |
| <b>A.2 Sample Course Delivery WhatsApp</b> |   |   |  |   |   |  |
| Course and verification                    | -0.090<br>(0.177)   | -0.231<br>(0.228)   | 0.075<br>(0.194)   | -0.198<br>(0.229)   | 0.088<br>(0.194)  | 0.082<br>(0.181)   |
| Course                                     | -0.190<br>(0.180)   | -0.029<br>(0.232)   | 0.332*<br>(0.197)  | 0.058<br>(0.233)  | 0.000<br>(0.198)  | 0.000<br>(0.184)   |
| Verification                               | 0.016<br>(0.191)  | 0.103<br>(0.246)  | 0.241<br>(0.209)   | -0.166<br>(0.247)   | 0.192<br>(0.209)  | 0.179<br>(0.195)   |
| Course and Verification (p-value)          | 0.613   | 0.311   | 0.7  | 0.387   | 0.652   | 0.652  |
| Course (p-value)                           | 0.293   | 0.9   | 0.094  | 0.804   | 0.998   | 0.998  |
| Verification (p-value)                     | 0.935   | 0.674   | 0.25   | 0.5   | 0.359   | 0.359  |
| $\tau_1 + \tau_2 = 0$ (p-value)            | 0.68  | 0.569   | 0.328  | 0.658   | 0.782   | 0.782  |
| Control mean                               | -0.02   | 2.768   | 1.826  | 2.152   | -0.011  | 3.797  |
| Control std. dev.                          | 1.017   | 1.192   | 1.039  | 1.317   | 1.072   | 0.998  |
| Outcome range                              | [-3,2.1]  | [1,5]   | [1,5]  | [1,5]   | [-3,1.3]  | [1,5]  |
| Observations                               | 463   | 463   | 463  | 463   | 463   | 463  |
| R <sup>2</sup>                             | 0.461   | 0.394   | 0.436  | 0.392   | 0.350   | 0.350  |

Notes: We report estimates from OLS regression including randomization block fixed effects. Robust standard errors are in parentheses.  $\tau_1$  is the vector of parameters for the treatment groups in the Online sample, and  $\tau_1 + \tau_2$  captures the effect for the WhatsApp sample as in equation S1. †: imagine you received an that came to you on WhatsApp with a screenshot of the Twitter account of a well-known person saying something very controversial. ††: imagine you received an audio that came to you by WhatsApp reporting evidence of corruption of a politician that you already suspected and you did not like. \* denotes  $p < 0.1$ , \*\* denotes  $p < 0.05$ , and \*\*\* denotes  $p < 0.01$ .

# Treatment Effects

Table S12: Endline survey questions used to create all outcome indices

| Indexes   | Variables  | Direction |
|---|--|-----------|
| <b>Misinformation importance index</b>                    | How likely do you think misinformation contributes to the following problems in Bolivian society? <sup>1</sup> | 1         |
| <b>Likelihood of false of traditional sources index</b>   | How much do you think the information in these sources is true? - Traditional media <sup>2</sup>               | -1        |
| <b>Likelihood of false of social media sources index</b>  | How much do you think the information in these sources is true? - Social media <sup>2</sup>                    | 1         |
|   | Hypothetical scenario 1: How likely is it that you think it's fake? <sup>3</sup>                               | 1         |
|   | Hypothetical scenario 3: How likely is it that you think it's fake? <sup>3</sup>                               | 1         |
| <b>Distrust traditional sources index</b>                 | How much do you trust the information you receive from these sources? - Traditional media <sup>2</sup>         | 1         |
| <b>Distrust social media sources index</b>                | How much do you trust the information you receive from these sources? - Social media <sup>2</sup>              | -1        |
| <b>Attention to misinformation index</b>                  | How often do you question whether a news is false  | 1         |
| <b>Knowledge to identify information index</b>            | How much knowledge do you have to identify whether a news is false or not?                                     | 1         |
|   | What are the main characteristics of a piece of news that make you doubt that it may be false?                 | 1         |
|   | How many recent misinformation cases in Bolivia do you know?   | 1         |
|   | What are the main means by which fake news spread? - Traditional media <sup>2</sup>                            | -1        |
|   | What are the main means by which fake news spread? - Social media <sup>2</sup>                                 | 1         |
| <b>Knowledge to verify information index</b>              | How much knowledge do you have to verify if doubtful news is false or not?                                     | 1         |
|   | What are the main ways to verify news?   | 1         |
|   | If you wanted to verify some information, what fact-checkers could you use? - Number of fact-checkers          | 1         |
| <b>Consumption behavior of traditional sources index</b>  | How often do you get news from these different types of sources? - Traditional media <sup>2</sup>              | 1         |
| <b>Consumption behavior of social media sources index</b> | How often do you get news from these different types of sources? - Social media <sup>2</sup>                   | -1        |
| <b>Sharing behavior index</b>                             | If you know a story is false, how often do you share its falsehood with others on social media?                | 1         |
|   | How often do you share news you receive on WhatsApp and social media   | -1        |
|   | Hypothetical scenario 1: How likely are you to share it without verifying it first? <sup>3</sup>               | -1        |
|   | Hypothetical scenario 3: How likely are you to share it without verifying it first? <sup>3</sup>               | -1        |
| <b>Verifying behavior index</b>                           | How often do you verify news that you doubt may be false before sharing it?                                    | 1         |

Notes: <sup>1</sup> Problems in Bolivian society: Decisions that may affect health, the election of candidates who do not represent the interests of citizens, disparage or exalt people, ideological polarization, violence towards certain people or falsely from society, and increase hatred towards certain people or groups in society.

<sup>2</sup> Traditional media: Radio/TV, Newspaper, and webpages. Social media: WhatsApp, Conversations with family and friends, WhatsApp with family and friends, and WhatsApp group with unknown people. <sup>3</sup> Hypothetical scenario 1: You received an image that came to you on WhatsApp with a screenshot of the Twitter account of a well-known person saying something very controversial.

Hypothetical scenario 3: You received an audio that came to you by WhatsApp reporting evidence of corruption of a politician that you already suspected and you did not like.

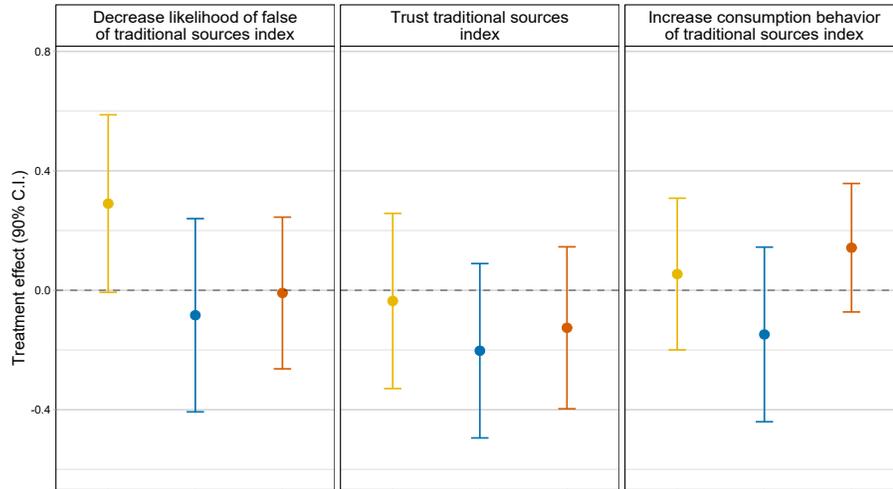
Table S13: Treatment effects on indexes by course delivered online and via WhatsApp

| Panel A: Treatment effects with covariates in the outcome family      |                                      |   |  |                                     |  |  |  |  |  |  |                                      |  |
|---|--------------------------------------|---|--|-------------------------------------|--|--|--|--|--|--|--------------------------------------|--|
|   | Mis-information importance index (1) | Decrease likelihood of false of traditional sources index (2) | Increase likelihood of false of social media sources index (3) | Trust traditional sources index (4) | Disrupt social media sources index (5) | Attention to mis-information index (6) | Increase knowledge to identify information index (7) | Increase knowledge to verify information index (8) | Increase consumption behavior of traditional sources index (9) | Decrease consumption behavior of social media sources index (10) | Decrease sharing behavior index (11) | Increase verifying behavior index (12) |
| <b>A.1 Sample course Delivery Online</b>                              |                                      |   |  |                                     |  |  |  |  |  |  |                                      |  |
| Course and verification   | -0.004 (0.188)                       | 0.290 (0.180)   | -0.116 (0.153)   | -0.036 (0.178)                      | -0.046 (0.187)                         | 0.218 (0.173)                          | 0.197 (0.174)  | 0.606*** (0.133)                                   | 0.054 (0.154)  | -0.228 (0.165)   | 0.152 (0.184)                        | 0.135 (0.175)                          |
| Course  | 0.148 (0.209)                        | -0.084 (0.196)  | 0.173 (0.169)  | -0.203 (0.177)                      | 0.075 (0.188)                          | 0.090 (0.171)                          | 0.245 (0.193)  | 0.569*** (0.160)                                   | -0.148 (0.177)   | -0.088 (0.157)   | 0.292 (0.232)                        | 0.190 (0.197)                          |
| Verification  | -0.039 (0.167)                       | -0.009 (0.154)  | -0.193 (0.162)   | -0.126 (0.164)                      | -0.083 (0.190)                         | 0.226 (0.155)                          | -0.036 (0.160)                                       | -0.004 (0.117)                                     | 0.143 (0.130)  | -0.258* (0.151)  | 0.374** (0.184)                      | -0.012 (0.179)                         |
| Course and Verification (p-value)                                     | 0.983                                | 0.108   | 0.448  | 0.84                                | 0.805                                  | 0.208                                  | 0.259  | 0  | 0.724  | 0.169  | 0.412                                | 0.44                                   |
| Course (p-value)  | 0.479                                | 0.67  | 0.305  | 0.253                               | 0.691                                  | 0.598                                  | 0.206  | 0  | 0.405  | 0.574  | 0.209                                | 0.336                                  |
| Verification (p-value)  | 0.817                                | 0.953   | 0.236  | 0.445                               | 0.663                                  | 0.148                                  | 0.823  | 0.97   | 0.275  | 0.087  | 0.043                                | 0.945                                  |
| $\tau_1 = 0$ (p-value)  | 0.8841                               | 0.3243  | 0.375  | 0.7582                              | 0.9098                                 | 0.5199                                 | 0.4464   | 0  | 0.6252   | 0.4284   | 0.2448                               | 0.7227                                 |
| <b>A.2 Sample Course Delivery WhatsApp</b>                            |                                      |   |  |                                     |  |  |  |  |  |  |                                      |  |
| Course and verification   | -0.023 (0.145)                       | 0.073 (0.144)   | 0.357** (0.140)  | 0.097 (0.138)                       | 0.109 (0.137)                          | 0.297** (0.127)                        | 0.076 (0.145)  | 0.154 (0.128)                                      | -0.191 (0.159)   | 0.269* (0.145)   | -0.023 (0.143)                       | 0.038 (0.144)                          |
| Course  | -0.277* (0.166)                      | -0.184 (0.144)  | 0.262* (0.152)   | 0.050 (0.140)                       | 0.343** (0.149)                        | 0.162 (0.134)                          | 0.072 (0.144)  | 0.215* (0.120)                                     | -0.081 (0.171)   | 0.364*** (0.120)   | 0.102 (0.144)                        | 0.049 (0.152)                          |
| Verification  | -0.184 (0.168)                       | 0.053 (0.148)   | 0.285** (0.131)  | 0.002 (0.151)                       | 0.227* (0.136)                         | 0.114 (0.129)                          | 0.025 (0.165)  | 0.087 (0.133)                                      | -0.069 (0.154)   | 0.464*** (0.138)   | 0.243 (0.169)                        | 0.208 (0.131)                          |
| Course and Verification (p-value)                                     | 0.874                                | 0.614   | 0.011  | 0.481                               | 0.425                                  | 0.02                                   | 0.6  | 0.23   | 0.232  | 0.065  | 0.872                                | 0.793                                  |
| Course (p-value)  | 0.096                                | 0.203   | 0.086  | 0.72                                | 0.022                                  | 0.27                                   | 0.616  | 0.075  | 0.634  | 0.003  | 0.481                                | 0.749                                  |
| Verification (p-value)  | 0.275                                | 0.72  | 0.03   | 0.988                               | 0.095                                  | 0.379                                  | 0.88   | 0.514  | 0.657  | 0.001  | 0.151                                | 0.113                                  |
| $\tau_1 + \tau_2 = 0$ (p-value)                                       | 0.458                                | 0.526   | 0.2  | 0.943                               | 0.287                                  | 0.358                                  | 0.97   | 0.552  | 0.772  | 0.053  | 0.573                                | 0.745                                  |
| R <sup>2</sup>  | 0.379                                | 0.462   | 0.485  | 0.491                               | 0.456                                  | 0.543                                  | 0.450  | 0.604  | 0.457  | 0.531  | 0.381                                | 0.437                                  |
| <b>Panel B: IPSW with covariates in the outcome family</b>            |                                      |   |  |                                     |  |  |  |  |  |  |                                      |  |
| <b>Panel B.1: Sample course Delivery Online</b>                       |                                      |   |  |                                     |  |  |  |  |  |  |                                      |  |
| Course and verification   | 0.002 (0.186)                        | 0.275 (0.179)   | -0.115 (0.155)   | -0.026 (0.178)                      | -0.038 (0.182)                         | 0.247 (0.175)                          | 0.186 (0.172)  | 0.624*** (0.138)                                   | 0.059 (0.160)  | -0.218 (0.170)   | 0.142 (0.179)                        | 0.151 (0.174)                          |
| Course  | 0.174 (0.211)                        | -0.036 (0.197)  | 0.175 (0.175)  | -0.185 (0.175)                      | 0.093 (0.181)                          | 0.118 (0.168)                          | 0.228 (0.190)  | 0.643*** (0.160)                                   | -0.199 (0.171)   | -0.055 (0.158)   | 0.366** (0.198)                      | 0.259 (0.189)                          |
| Verification  | -0.076 (0.170)                       | -0.029 (0.161)  | -0.149 (0.170)   | -0.148 (0.171)                      | -0.048 (0.189)                         | 0.271* (0.161)                         | -0.008 (0.165)                                       | 0.028 (0.124)                                      | 0.146 (0.137)  | -0.264* (0.155)  | 0.361** (0.180)                      | -0.007 (0.181)                         |
| Course and Verification (p-value)                                     | 0.99                                 | 0.124   | 0.457  | 0.884                               | 0.836                                  | 0.16                                   | 0.28   | 0  | 0.714  | 0.2  | 0.428                                | 0.386                                  |
| Course (p-value)  | 0.41                                 | 0.856   | 0.317  | 0.291                               | 0.607                                  | 0.483                                  | 0.23   | 0  | 0.276  | 0.726  | 0.066                                | 0.172                                  |
| Verification (p-value)  | 0.656                                | 0.857   | 0.381  | 0.388                               | 0.798                                  | 0.093                                  | 0.963  | 0.819  | 0.289  | 0.09   | 0.046                                | 0.968                                  |
| $\tau_1 = 0$ (p-value)  | 0.7937                               | 0.4146  | 0.475  | 0.7676                              | 0.9264                                 | 0.4635                                 | 0.5833   | 1e-04  | 0.52   | 0.5052   | 0.2483                               | 0.5696                                 |
| <b>B.2 Sample Course Delivery WhatsApp</b>                            |                                      |   |  |                                     |  |  |  |  |  |  |                                      |  |
| Course and verification   | -0.084 (0.162)                       | 0.096 (0.150)   | 0.332** (0.143)  | 0.096 (0.140)                       | 0.112 (0.140)                          | 0.322** (0.131)                        | 0.068 (0.147)  | 0.109 (0.128)                                      | -0.169 (0.162)   | 0.303** (0.141)  | -0.018 (0.143)                       | 0.025 (0.147)                          |
| Course  | -0.343** (0.174)                     | -0.185 (0.155)  | 0.245 (0.148)  | 0.063 (0.143)                       | 0.358** (0.149)                        | 0.178 (0.133)                          | 0.065 (0.147)  | 0.221* (0.120)                                     | -0.041 (0.171)   | 0.388*** (0.120)   | 0.082 (0.143)                        | 0.038 (0.158)                          |
| Verification  | -0.163 (0.176)                       | 0.117 (0.146)   | 0.275** (0.132)  | 0.042 (0.149)                       | 0.199 (0.136)                          | 0.133 (0.131)                          | -0.015 (0.158)                                       | 0.064 (0.128)                                      | -0.033 (0.165)   | 0.489*** (0.140)   | 0.278* (0.163)                       | 0.189 (0.144)                          |
| Course and Verification (p-value)                                     | 0.603                                | 0.524   | 0.021  | 0.492                               | 0.423                                  | 0.014                                  | 0.644  | 0.398  | 0.299  | 0.032  | 0.901                                | 0.863                                  |
| Course (p-value)  | 0.05                                 | 0.233   | 0.1  | 0.658                               | 0.017                                  | 0.183                                  | 0.657  | 0.066  | 0.891  | 0.001  | 0.565                                | 0.811                                  |
| Verification (p-value)  | 0.355                                | 0.424   | 0.039  | 0.777                               | 0.145                                  | 0.313                                  | 0.924  | 0.618  | 0.842  | 0.001  | 0.089                                | 0.191                                  |
| $\tau_1 + \tau_2 = 0$ (p-value)                                       | 0.339                                | 0.307   | 0.231  | 0.952                               | 0.221                                  | 0.234                                  | 0.949  | 0.524  | 0.793  | 0.026  | 0.369                                | 0.728                                  |
| R <sup>2</sup>  | 0.385                                | 0.499   | 0.519  | 0.533                               | 0.485                                  | 0.589                                  | 0.487  | 0.620  | 0.484  | 0.561  | 0.437                                | 0.499                                  |
| <b>Panel C: Treatment effects with covariates selected with LASSO</b> |                                      |   |  |                                     |  |  |  |  |  |  |                                      |  |
| <b>Panel C.1: Sample course Delivery Online</b>                       |                                      |   |  |                                     |  |  |  |  |  |  |                                      |  |
| Course and verification   | -0.029 (0.189)                       | 0.393** (0.169)   | -0.189 (0.156)   | 0.028 (0.179)                       | 0.003 (0.183)                          | 0.195 (0.172)                          | 0.212 (0.161)  | 0.573*** (0.135)                                   | 0.115 (0.152)  | -0.265 (0.167)   | 0.118 (0.172)                        | 0.064 (0.157)                          |
| Course  | 0.147 (0.202)                        | -0.042 (0.193)  | 0.221 (0.174)  | -0.180 (0.175)                      | 0.097 (0.187)                          | 0.116 (0.172)                          | 0.374** (0.183)                                      | 0.634*** (0.140)                                   | -0.116 (0.164)   | -0.072 (0.161)   | 0.331 (0.215)                        | 0.180 (0.181)                          |
| Verification  | -0.041 (0.167)                       | -0.043 (0.147)  | -0.194 (0.159)   | -0.113 (0.157)                      | -0.128 (0.186)                         | 0.220 (0.154)                          | 0.039 (0.148)  | -0.002 (0.111)                                     | 0.162 (0.124)  | -0.264* (0.147)  | 0.423** (0.169)                      | -0.069 (0.164)                         |
| Course and Verification (p-value)                                     | 0.877                                | 0.021   | 0.225  | 0.875                               | 0.988                                  | 0.257                                  | 0.19   | 0  | 0.453  | 0.114  | 0.493                                | 0.684                                  |
| Course (p-value)  | 0.467                                | 0.826   | 0.204  | 0.303                               | 0.604                                  | 0.501                                  | 0.042  | 0  | 0.48   | 0.654  | 0.126                                | 0.32                                   |
| Verification (p-value)  | 0.806                                | 0.769   | 0.223  | 0.474                               | 0.49                                   | 0.155                                  | 0.795  | 0.989  | 0.192  | 0.074  | 0.013                                | 0.675                                  |
| $\tau_1 = 0$ (p-value)  | 0.8664                               | 0.0804  | 0.1897   | 0.7066                              | 0.7655                                 | 0.5724                                 | 0.2219   | 0  | 0.5776   | 0.3239   | 0.1155                               | 0.6903                                 |
| <b>C.2 Sample Course Delivery WhatsApp</b>                            |                                      |   |  |                                     |  |  |  |  |  |  |                                      |  |
| Course and verification   | -0.059 (0.145)                       | 0.064 (0.130)   | 0.327** (0.131)  | 0.149 (0.135)                       | 0.165 (0.136)                          | 0.267** (0.129)                        | 0.092 (0.137)  | 0.193 (0.120)                                      | -0.107 (0.150)   | 0.255* (0.144)   | -0.022 (0.138)                       | 0.045 (0.139)                          |
| Course  | -0.301* (0.164)                      | -0.207 (0.134)  | 0.234 (0.146)  | 0.102 (0.134)                       | 0.390*** (0.142)                       | 0.119 (0.143)                          | 0.129 (0.128)  | 0.235** (0.116)                                    | -0.082 (0.161)   | 0.404*** (0.117)   | 0.131 (0.146)                        | 0.100 (0.142)                          |
| Verification  | -0.192 (0.168)                       | 0.047 (0.136)   | 0.279** (0.126)  | 0.013 (0.146)                       | 0.266* (0.136)                         | 0.099 (0.133)                          | 0.080 (0.152)  | 0.045 (0.127)                                      | -0.030 (0.151)   | 0.443*** (0.137)   | 0.319* (0.170)                       | 0.194 (0.128)                          |
| Course and Verification (p-value)                                     | 0.682                                | 0.623   | 0.013  | 0.27                                | 0.224                                  | 0.04                                   | 0.504  | 0.11   | 0.474  | 0.078  | 0.874                                | 0.749                                  |
| Course (p-value)  | 0.068                                | 0.125   | 0.11   | 0.445                               | 0.006                                  | 0.405                                  | 0.317  | 0.043  | 0.609  | 0.001  | 0.371                                | 0.483                                  |
| Verification (p-value)  | 0.255                                | 0.733   | 0.028  | 0.932                               | 0.052                                  | 0.459                                  | 0.6  | 0.727  | 0.844  | 0.001  | 0.061                                | 0.133                                  |
| $\tau_1 + \tau_2 = 0$ (p-value)                                       | 0.426                                | 0.416   | 0.248  | 0.805                               | 0.187                                  | 0.458                                  | 0.892  | 0.332  | 0.931  | 0.042  | 0.312                                | 0.754                                  |
| Outcome mean  | 0                                    | 0   | 0  | 0                                   | 0                                      | 0                                      | 0  | 0  | 0  | 0  | 0                                    | 0                                      |
| Outcome std. dev.   | 1                                    | 1   | 1  | 1                                   | 1                                      | 1                                      | 1  | 1  | 1  | 1  | 1                                    | 1                                      |
| Outcome range   | [-3.2,0.6]                           | [-4.1,3.1]  | [-3.8,2.5]   | [-2.6,2.2]                          | [-3.4,1.7]                             | [-3.6,1.4]                             | [-3.3,2.5]   | [-3.3,2.1]   | [-2.8,1.8]   | [-1.7,3.3]   | [-3.5,1]                             | [-3,1.3]                               |
| Num. LASSO covariates   | 0                                    | 9   | 8  | 2                                   | 0                                      | 8                                      | 3  | 7  | 12   | 6  | 7                                    | 7                                      |
| Observations  | 463                                  | 463   | 463  | 463                                 | 463                                    | 463                                    | 463  | 463  | 463  | 463  | 463                                  | 463                                    |
| R <sup>2</sup>  | 0.367                                | 0.531   | 0.500  | 0.508                               | 0.451                                  | 0.523                                  | 0.537  | 0.656  | 0.515  | 0.538  | 0.441                                | 0.506                                  |

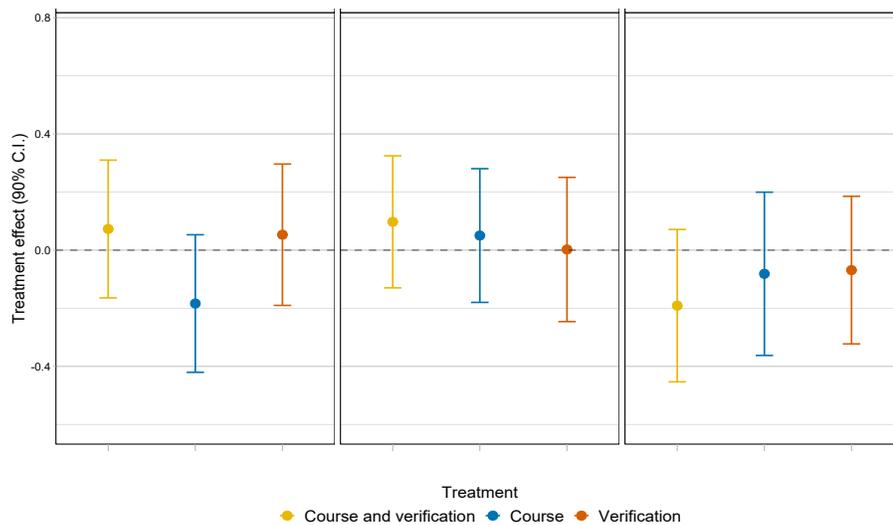
Notes: We report estimates from OLS regression including randomization block fixed effects. All specifications in all panels include the corresponding outcome variables at baseline as a control. Specifications in Panel A and B further include covariates in the outcome family as controls. Specifications in Panel A and B further include covariates in the outcome family as controls. Specifications in Panel C are from a 10-fold cross validation LASSO model with lambda chosen to be that of the minimum average cross-validated error. The treatment indicators, lagged dependent variable, and fixed effects are forced into the LASSO model and covariates are selected from a pool of 72 baseline variables for each specification. Robust standard errors are in parentheses.  $\tau_1$  is the vector of parameters for the treatment groups in the Online sample, and  $\tau_1 + \tau_2$  captures the effect for the WhatsApp sample as in equation S1. \* denotes  $p < 0.1$ , \*\* denotes  $p < 0.05$ , and \*\*\* denotes  $p < 0.01$ .

Figure S1: Treatment effects on traditional sources: likelihood of false, distrust, and consumption of traditional sources

(a) Sample course delivery online



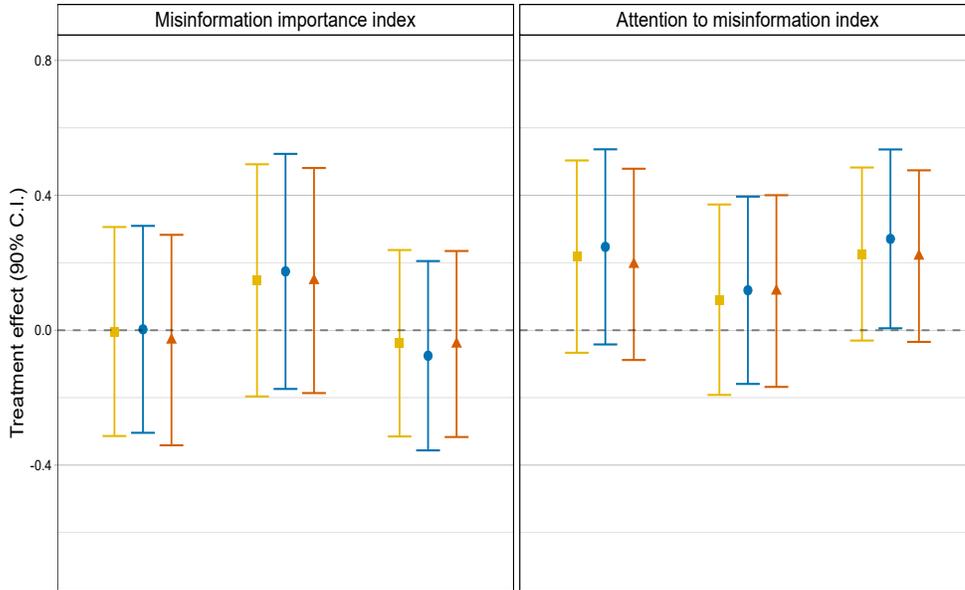
(b) Sample course delivery WhatsApp



Notes: The estimates and 90% confidence intervals in each box are from separate OLS regressions. The labels are the corresponding dependent variables regressed on treatment indicators and randomization block fixed effects. The outcomes are in columns (2), (4), and (9) of Panel A of Appendix Table S13.

Figure S2: Treatment effects comparison between OLS, IPSW, and LASSO methods on mechanisms: misinformation importance and attention to misinformation

(a) Sample course delivery online



(b) Sample course delivery WhatsApp

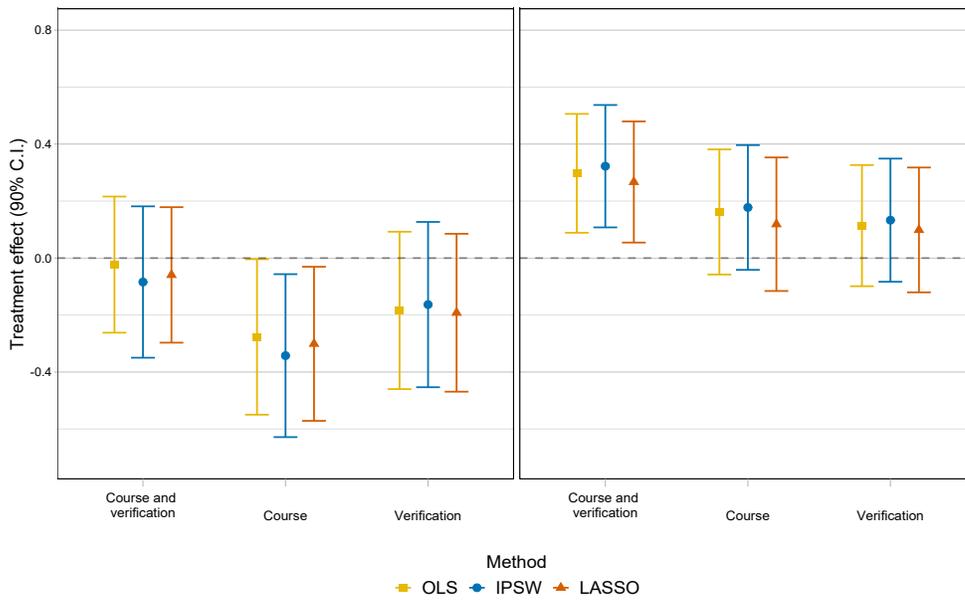
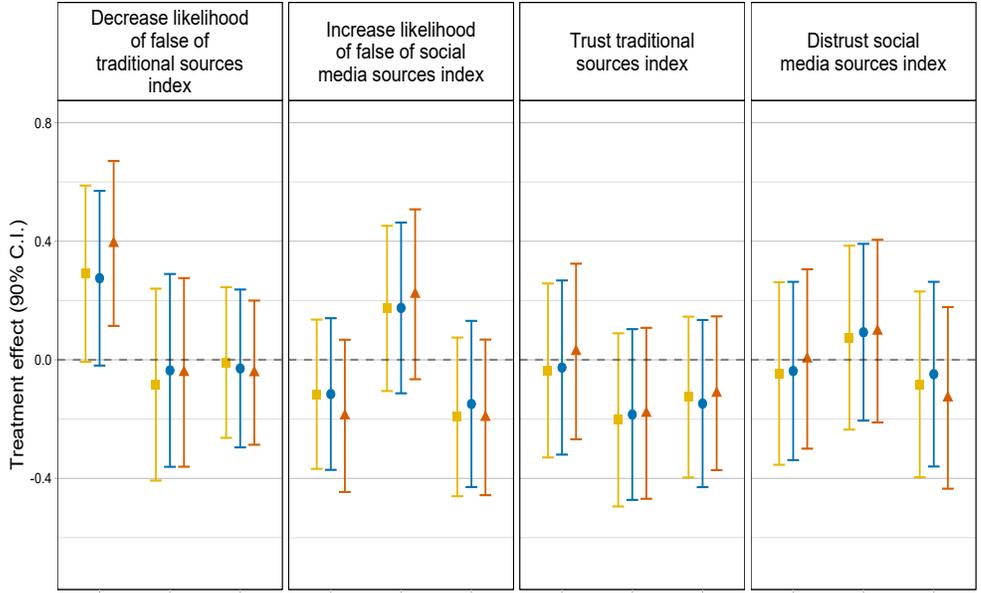
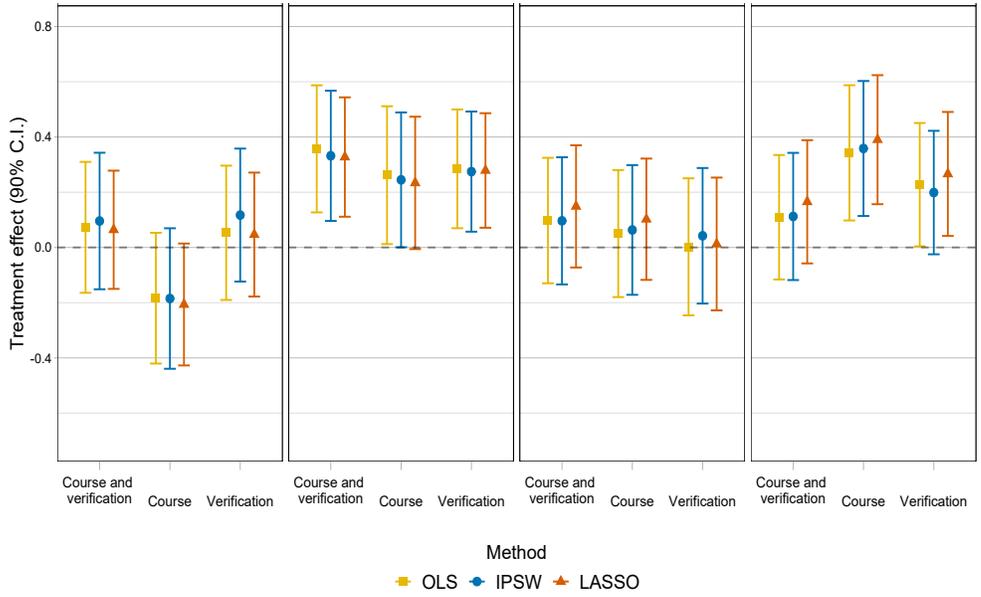


Figure S3: Treatment effects comparison between OLS, IPSW, and LASSO methods on mechanisms: likelihood of false and distrust of traditional and social media sources

(a) Sample course delivery online



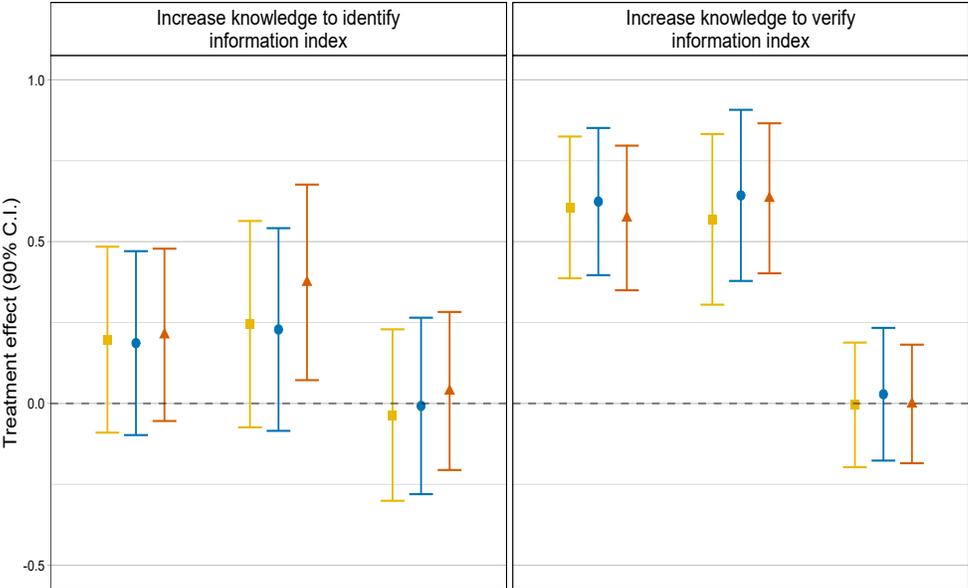
(b) Sample course delivery WhatsApp



Method  
 ■ OLS ◆ IPSW ▲ LASSO

Figure S4: Treatment effects comparison between OLS, IPSW, and LASSO methods on knowledge to identify and verify information

(a) Sample course delivery online



(b) Sample course delivery WhatsApp

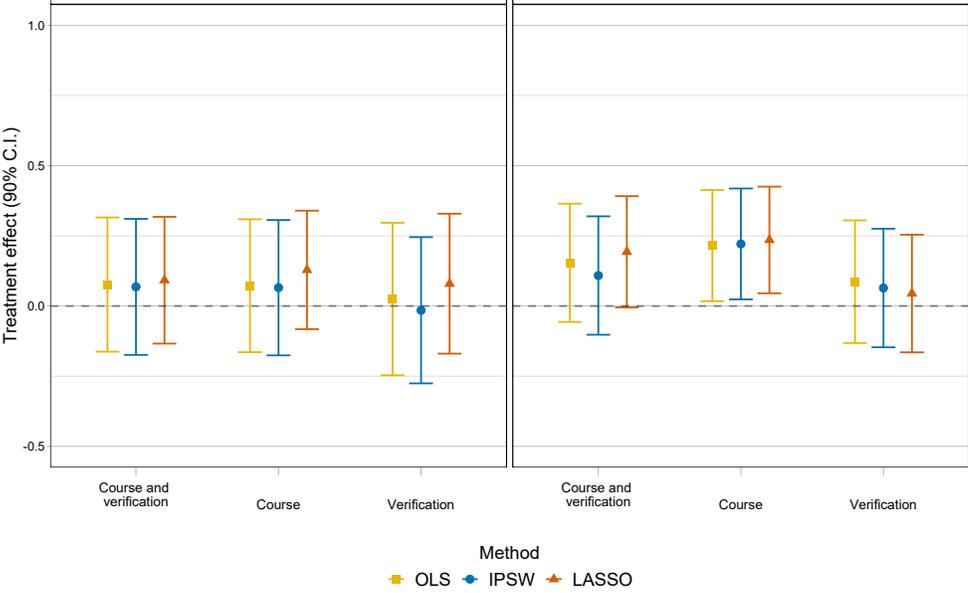
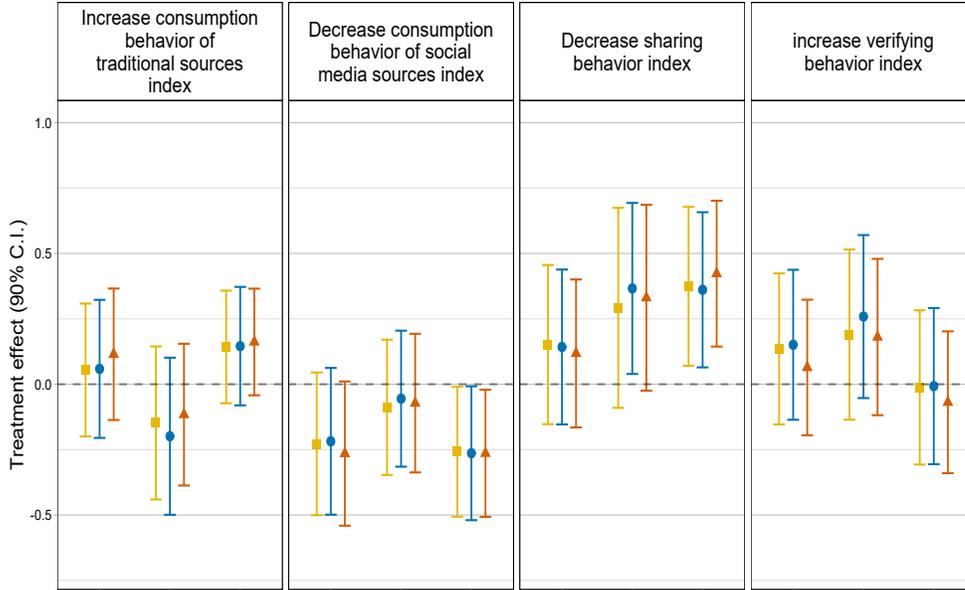


Figure S5: Treatment effects comparison between OLS, IPSW, and LASSO methods on consumption, sharing, and verifying behavior

(a) Sample course delivery online



(b) Sample course delivery WhatsApp

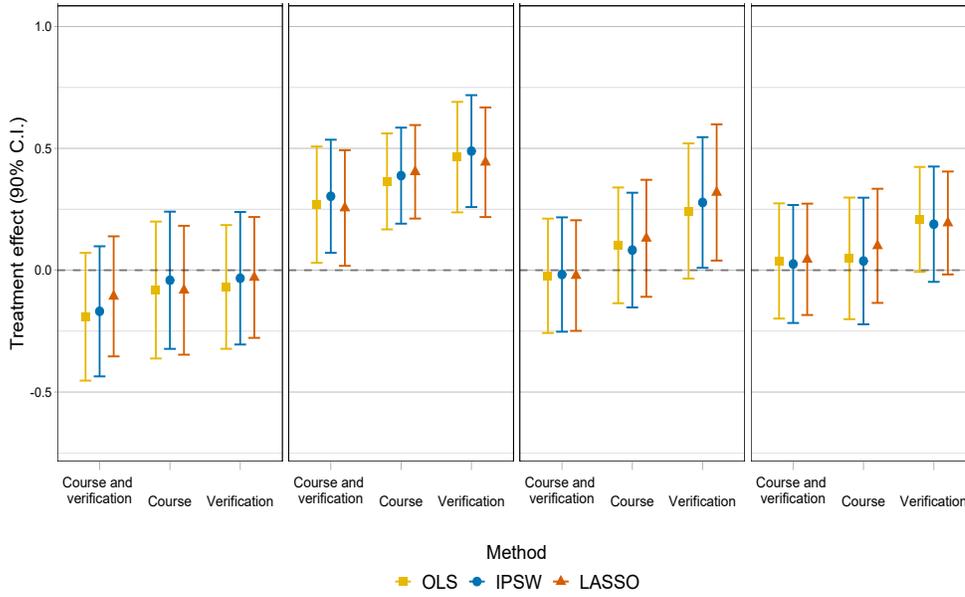


Table S14: Treatment effects on mechanisms: Misinformation relevance index's components

| <b>Panel A: Treatment effects with covariates in the outcome family</b> |  |                                  |   |  |                              |  |   |
|---|--|----------------------------------|---|--|------------------------------|--|---|
|   | Misinformation importance index of (1,1,1,1,1,1,1) (1) | Decisions that affect health (2) | Election of candidates who do not represent the interests of citizens (3) | To falsely discredit or glorify people (4) | Ideological polarization (5) | Violence towards certain people or groups in society (6) | Increase hatred towards certain people or groups in society (7) |
| <b>A.1 Sample course Delivery Online</b>                                |  |                                  |   |  |                              |  |   |
| Course and verification   | -0.004 (0.188)   | 0.056 (0.222)                    | -0.165 (0.235)  | -0.003 (0.226)                             | 0.109 (0.217)                | 0.168 (0.212)  | -0.041 (0.219)  |
| Course  | 0.148 (0.209)  | 0.075 (0.259)                    | 0.239 (0.248)   | 0.062 (0.227)                              | 0.116 (0.232)                | 0.114 (0.236)  | 0.192 (0.255)   |
| Verification  | -0.039 (0.167)   | 0.044 (0.215)                    | -0.100 (0.199)  | -0.027 (0.187)                             | -0.058 (0.189)               | -0.011 (0.202)   | -0.193 (0.207)  |
| Course and Verification (p-value)                                       | 0.983  | 0.8                              | 0.483   | 0.991                                      | 0.616                        | 0.428  | 0.851   |
| Course (p-value)  | 0.479  | 0.771                            | 0.338   | 0.783                                      | 0.616                        | 0.629  | 0.452   |
| Verification (p-value)  | 0.817  | 0.836                            | 0.617   | 0.886                                      | 0.76                         | 0.956  | 0.353   |
| $\tau_1 = 0$ (p-value)  | 0.8841   | 0.9923                           | 0.5856  | 0.9908                                     | 0.8931                       | 0.8622   | 0.6125  |
| <b>A.2 Sample Course Delivery WhatsApp</b>                              |  |                                  |   |  |                              |  |   |
| Course and verification   | -0.023 (0.145)   | -0.045 (0.162)                   | 0.092 (0.181)   | 0.070 (0.171)                              | 0.114 (0.178)                | -0.081 (0.164)   | -0.185 (0.170)  |
| Course  | -0.277* (0.166)  | -0.381** (0.184)                 | -0.174 (0.199)  | -0.126 (0.186)                             | -0.147 (0.194)               | -0.440** (0.192)   | -0.293 (0.184)  |
| Verification  | -0.184 (0.168)   | -0.525*** (0.199)                | -0.059 (0.207)  | 0.061 (0.185)                              | 0.120 (0.207)                | -0.128 (0.182)   | -0.338* (0.190)   |
| Course and Verification (p-value)                                       | 0.874  | 0.78                             | 0.611   | 0.684                                      | 0.522                        | 0.624  | 0.276   |
| Course (p-value)  | 0.096  | 0.04                             | 0.383   | 0.498                                      | 0.447                        | 0.023  | 0.113   |
| Verification (p-value)  | 0.275  | 0.009                            | 0.775   | 0.74                                       | 0.562                        | 0.484  | 0.077   |
| $\tau_1 + \tau_2 = 0$ (p-value)   | 0.458  | 0.092                            | 0.749   | 0.83                                       | 0.668                        | 0.242  | 0.501   |
| R <sup>2</sup>  | 0.379  | 0.339                            | 0.383   | 0.404                                      | 0.394                        | 0.410  | 0.406   |
| <b>Panel B: IPSW with covariates in the outcome family</b>              |  |                                  |   |  |                              |  |   |
| <b>Panel B.1: Sample course Delivery Online</b>                         |  |                                  |   |  |                              |  |   |
| Course and verification   | 0.002 (0.186)  | 0.058 (0.227)                    | -0.194 (0.235)  | 0.029 (0.221)                              | 0.168 (0.215)                | 0.184 (0.210)  | -0.054 (0.221)  |
| Course  | 0.174 (0.211)  | 0.108 (0.268)                    | 0.237 (0.239)   | 0.103 (0.229)                              | 0.126 (0.232)                | 0.161 (0.239)  | 0.238 (0.262)   |
| Verification  | -0.076 (0.170)   | 0.005 (0.232)                    | -0.149 (0.200)  | -0.090 (0.191)                             | -0.065 (0.193)               | -0.055 (0.203)   | -0.259 (0.211)  |
| Course and Verification (p-value)                                       | 0.99   | 0.798                            | 0.41  | 0.895                                      | 0.435                        | 0.381  | 0.808   |
| Course (p-value)  | 0.41   | 0.686                            | 0.323   | 0.654                                      | 0.588                        | 0.5  | 0.365   |
| Verification (p-value)  | 0.656  | 0.984                            | 0.456   | 0.64                                       | 0.735                        | 0.785  | 0.22  |
| $\tau_1 = 0$ (p-value)  | 0.7937   | 0.9797                           | 0.5076  | 0.9256                                     | 0.8325                       | 0.7678   | 0.4375  |
| <b>B.2 Sample Course Delivery WhatsApp</b>                              |  |                                  |   |  |                              |  |   |
| Course and verification   | -0.084 (0.162)   | -0.107 (0.177)                   | 0.014 (0.196)   | 0.003 (0.186)                              | 0.040 (0.197)                | -0.136 (0.179)   | -0.243 (0.183)  |
| Course  | -0.343** (0.174)                                       | -0.451** (0.193)                 | -0.258 (0.210)  | -0.214 (0.195)                             | -0.231 (0.207)               | -0.492** (0.196)   | -0.376* (0.192)   |
| Verification  | -0.163 (0.176)   | -0.488** (0.205)                 | -0.030 (0.217)  | 0.094 (0.192)                              | 0.114 (0.219)                | -0.080 (0.219)   | -0.309 (0.191)  |
| Course and Verification (p-value)                                       | 0.603  | 0.546                            | 0.941   | 0.987                                      | 0.839                        | 0.449  | 0.184   |
| Course (p-value)  | 0.05   | 0.02                             | 0.221   | 0.274                                      | 0.265                        | 0.013  | 0.05  |
| Verification (p-value)  | 0.355  | 0.018                            | 0.891   | 0.624                                      | 0.602                        | 0.674  | 0.106   |
| $\tau_1 + \tau_2 = 0$ (p-value)   | 0.339  | 0.086                            | 0.629   | 0.569                                      | 0.491                        | 0.126  | 0.398   |
| R <sup>2</sup>  | 0.385  | 0.355                            | 0.394   | 0.415                                      | 0.386                        | 0.429  | 0.435   |
| <b>Panel C: Treatment effects with covariates selected with LASSO</b>   |  |                                  |   |  |                              |  |   |
| <b>Panel C.1: Sample course Delivery Online</b>                         |  |                                  |   |  |                              |  |   |
| Course and verification   | -0.029 (0.189)   | 0.058 (0.218)                    | -0.172 (0.233)  | 0.081 (0.220)                              | 0.026 (0.230)                | 0.108 (0.208)  | 0.018 (0.217)   |
| Course  | 0.147 (0.202)  | 0.031 (0.255)                    | 0.201 (0.232)   | -0.004 (0.200)                             | 0.152 (0.235)                | 0.099 (0.232)  | 0.135 (0.227)   |
| Verification  | -0.041 (0.167)   | 0.062 (0.207)                    | -0.144 (0.185)  | -0.077 (0.169)                             | -0.099 (0.193)               | -0.005 (0.203)   | -0.191 (0.195)  |
| Course and Verification (p-value)                                       | 0.877  | 0.791                            | 0.462   | 0.713                                      | 0.91                         | 0.603  | 0.935   |
| Course (p-value)  | 0.467  | 0.903                            | 0.386   | 0.983                                      | 0.518                        | 0.671  | 0.554   |
| Verification (p-value)  | 0.806  | 0.763                            | 0.439   | 0.649                                      | 0.61                         | 0.982  | 0.327   |
| $\tau_1 = 0$ (p-value)  | 0.8664   | 0.9928                           | 0.562   | 0.9327                                     | 0.8485                       | 0.9465   | 0.6667  |
| <b>C.2 Sample Course Delivery WhatsApp</b>                              |  |                                  |   |  |                              |  |   |
| Course and verification   | -0.059 (0.145)   | -0.076 (0.160)                   | 0.068 (0.175)   | 0.119 (0.173)                              | 0.055 (0.175)                | -0.160 (0.166)   | -0.184 (0.171)  |
| Course  | -0.301* (0.164)  | -0.348* (0.181)                  | -0.228 (0.196)  | -0.078 (0.186)                             | -0.217 (0.191)               | -0.531*** (0.197)  | -0.181 (0.185)  |
| Verification  | -0.192 (0.168)   | -0.482** (0.200)                 | -0.092 (0.201)  | 0.062 (0.184)                              | 0.098 (0.210)                | -0.124 (0.183)   | -0.321* (0.191)   |
| Course and Verification (p-value)                                       | 0.682  | 0.635                            | 0.697   | 0.493                                      | 0.755                        | 0.336  | 0.282   |
| Course (p-value)  | 0.068  | 0.056                            | 0.244   | 0.675                                      | 0.256                        | 0.007  | 0.329   |
| Verification (p-value)  | 0.255  | 0.017                            | 0.649   | 0.736                                      | 0.641                        | 0.499  | 0.094   |
| $\tau_1 + \tau_2 = 0$ (p-value)   | 0.426  | 0.155                            | 0.63  | 0.832                                      | 0.592                        | 0.116  | 0.611   |
| Outcome mean  | 0  | 4.287                            | 4.272   | 4.46                                       | 4.393                        | 4.393  | 4.43  |
| Outcome std. dev.   | 1  | 1.152                            | 1.229   | 1.163                                      | 1.197                        | 1.17   | 1.22  |
| Outcome range   | [-3.2,0.6]   | [1,5]                            | [1,5]   | [1,5]                                      | [1,5]                        | [1,5]  | [1,5]   |
| Num. LASSO covariates   | 0  | 1                                | 2   | 11   | 1                            | 1  | 6   |
| Observations  | 463  | 463                              | 463   | 463  | 463                          | 463  | 463   |
| R <sup>2</sup>  | 0.367  | 0.345                            | 0.408   | 0.469                                      | 0.372                        | 0.395  | 0.438   |

Notes: We report estimates from OLS regression including randomization block fixed effects. All specifications in all panels include the corresponding outcome variables at baseline as a control. Specifications in Panel A and B further include covariates in the outcome family as controls. Specifications in Panel A and B further include covariates in the outcome family as controls. Specifications in Panel C are from a 10-fold cross validation LASSO model with lambda chosen to be that of the minimum average cross-validated error. The treatment indicators, lagged dependent variable, and fixed effects are forced into the LASSO model and covariates are selected from a pool of 72 baseline variables for each specification. Robust standard errors are in parentheses.  $\tau_1$  is the vector of parameters for the treatment groups in the Online sample, and  $\tau_1 + \tau_2$  captures the effect for the WhatsApp sample as in equation S1. \* denotes  $p < 0.1$ , \*\* denotes  $p < 0.05$ , and \*\*\* denotes  $p < 0.01$ .

Table S15: Treatment effects on mechanisms: Likelihood of false index's components

| Panel A: Treatment effects with covariates in the outcome family      |   |                   |                  |                |   |                  |                  |                   |                                 |                                   |
|---|---|-------------------|------------------|----------------|---|------------------|------------------|-------------------|---------------------------------|-----------------------------------|
|   | Decrease likelihood of false of traditional sources index of (-1,-1,-1) (1) | Radio / TV (2)    | Newspaper (3)    | Internet (4)   | Increase likelihood of false of social media sources index of (1,1,1,1,1) (5) | WhatsApp (6)     | Social media (7) | Conversations (8) | Believe scenario 1 is fake† (9) | Believe scenario 3 is fake†† (10) |
| <b>A.1 Sample course Delivery Online</b>                              |   |                   |                  |                |   |                  |                  |                   |                                 |                                   |
| Course and verification   | 0.290 (0.180)   | -0.191 (0.151)    | -0.179 (0.142)   | -0.132 (0.156) | -0.116 (0.153)  | 0.065 (0.128)    | 0.120 (0.131)    | -0.141 (0.126)    | -0.128 (0.254)                  | -0.249 (0.220)                    |
| Course  | -0.084 (0.196)  | -0.007 (0.166)    | -0.134 (0.127)   | 0.206 (0.190)  | 0.173 (0.169)   | 0.217 (0.144)    | 0.044 (0.128)    | -0.177 (0.135)    | 0.530** (0.236)                 | 0.077 (0.234)                     |
| Verification  | -0.009 (0.154)  | -0.177 (0.124)    | -0.073 (0.109)   | 0.156 (0.132)  | -0.193 (0.162)  | -0.059 (0.110)   | -0.120 (0.108)   | -0.338*** (0.122) | 0.292 (0.236)                   | -0.141 (0.204)                    |
| Course and Verification (p-value)                                     | 0.108   | 0.208             | 0.207            | 0.4            | 0.448   | 0.611            | 0.361            | 0.263             | 0.613                           | 0.258                             |
| Course (p-value)  | 0.67  | 0.966             | 0.293            | 0.279          | 0.305   | 0.132            | 0.734            | 0.192             | 0.026                           | 0.743                             |
| Verification (p-value)  | 0.953   | 0.155             | 0.507            | 0.239          | 0.236   | 0.592            | 0.266            | 0.006             | 0.216                           | 0.492                             |
| $\tau_1 = 0$ (p-value)  | 0.3243  | 0.5153            | 0.6744           | 0.2179         | 0.375   | 0.4248           | 0.4782           | 0.141             | 0.13                            | 0.6289                            |
| <b>A.2 Sample Course Delivery WhatsApp</b>                            |   |                   |                  |                |   |                  |                  |                   |                                 |                                   |
| Course and verification   | 0.073 (0.144)   | -0.211** (0.103)  | -0.033 (0.114)   | 0.042 (0.110)  | 0.357** (0.140)   | 0.193 (0.121)    | 0.158 (0.101)    | 0.204* (0.120)    | 0.382** (0.186)                 | -0.009 (0.154)                    |
| Course  | -0.184 (0.144)  | 0.008 (0.108)     | 0.205* (0.123)   | 0.074 (0.114)  | 0.262* (0.152)  | 0.258** (0.108)  | 0.047 (0.111)    | 0.119 (0.121)     | 0.276 (0.182)                   | 0.116 (0.160)                     |
| Verification  | 0.053 (0.148)   | -0.127 (0.119)    | -0.032 (0.124)   | 0.023 (0.107)  | 0.285** (0.131)   | 0.222** (0.105)  | 0.003 (0.117)    | 0.082 (0.111)     | 0.479** (0.204)                 | 0.123 (0.180)                     |
| Course and Verification (p-value)                                     | 0.614   | 0.041             | 0.774            | 0.703          | 0.011   | 0.112            | 0.117            | 0.089             | 0.041                           | 0.955                             |
| Course (p-value)  | 0.203   | 0.943             | 0.096            | 0.518          | 0.086   | 0.017            | 0.676            | 0.33              | 0.131                           | 0.472                             |
| Verification (p-value)  | 0.72  | 0.285             | 0.793            | 0.828          | 0.03  | 0.036            | 0.978            | 0.461             | 0.02                            | 0.495                             |
| $\tau_1 + \tau_2 = 0$ (p-value)                                       | 0.526   | 0.415             | 0.327            | 0.969          | 0.2   | 0.26             | 0.663            | 0.542             | 0.273                           | 0.905                             |
| R <sup>2</sup>  | 0.462   | 0.439             | 0.393            | 0.380          | 0.485   | 0.469            | 0.420            | 0.414             | 0.408                           | 0.452                             |
| <b>Panel B: IPSW with covariates in the outcome family</b>            |   |                   |                  |                |   |                  |                  |                   |                                 |                                   |
| <b>Panel B.1: Sample course Delivery Online</b>                       |   |                   |                  |                |   |                  |                  |                   |                                 |                                   |
| Course and verification   | 0.275 (0.179)   | -0.220 (0.152)    | -0.205 (0.142)   | -0.079 (0.163) | -0.115 (0.155)  | 0.083 (0.132)    | 0.110 (0.134)    | -0.157 (0.131)    | -0.080 (0.259)                  | -0.269 (0.218)                    |
| Course  | -0.036 (0.197)  | -0.026 (0.162)    | -0.186 (0.125)   | 0.194 (0.195)  | 0.175 (0.175)   | 0.192 (0.145)    | 0.048 (0.134)    | -0.171 (0.140)    | 0.555** (0.238)                 | 0.047 (0.229)                     |
| Verification  | -0.029 (0.161)  | -0.172 (0.132)    | -0.087 (0.112)   | 0.188 (0.144)  | -0.149 (0.170)  | -0.042 (0.120)   | -0.103 (0.114)   | -0.314** (0.129)  | 0.343 (0.242)                   | -0.137 (0.211)                    |
| Course and Verification (p-value)                                     | 0.124   | 0.148             | 0.151            | 0.63           | 0.457   | 0.533            | 0.412            | 0.233             | 0.757                           | 0.218                             |
| Course (p-value)  | 0.856   | 0.874             | 0.136            | 0.32           | 0.317   | 0.187            | 0.72             | 0.225             | 0.02                            | 0.838                             |
| Verification (p-value)  | 0.857   | 0.194             | 0.44             | 0.192          | 0.381   | 0.726            | 0.37             | 0.016             | 0.157                           | 0.516                             |
| $\tau_1 = 0$ (p-value)  | 0.4146  | 0.5337            | 0.5933           | 0.3132         | 0.475   | 0.5617           | 0.6379           | 0.2983            | 0.1124                          | 0.6445                            |
| <b>B.2 Sample Course Delivery WhatsApp</b>                            |   |                   |                  |                |   |                  |                  |                   |                                 |                                   |
| Course and verification   | 0.096 (0.150)   | -0.209* (0.107)   | -0.020 (0.119)   | 0.004 (0.112)  | 0.332** (0.143)   | 0.175 (0.124)    | 0.137 (0.103)    | 0.215* (0.122)    | 0.339* (0.194)                  | -0.013 (0.162)                    |
| Course  | -0.185 (0.155)  | 0.006 (0.117)     | 0.214* (0.128)   | 0.070 (0.117)  | 0.245 (0.148)   | 0.244** (0.112)  | 0.048 (0.114)    | 0.131 (0.125)     | 0.228 (0.184)                   | 0.096 (0.159)                     |
| Verification  | 0.117 (0.146)   | -0.157 (0.128)    | -0.055 (0.126)   | -0.025 (0.103) | 0.275** (0.132)   | 0.190* (0.111)   | -0.019 (0.115)   | 0.101 (0.114)     | 0.434** (0.208)                 | 0.167 (0.180)                     |
| Course and Verification (p-value)                                     | 0.524   | 0.052             | 0.865            | 0.975          | 0.021   | 0.158            | 0.184            | 0.079             | 0.081                           | 0.936                             |
| Course (p-value)  | 0.233   | 0.958             | 0.094            | 0.55           | 0.1   | 0.03             | 0.673            | 0.295             | 0.215                           | 0.548                             |
| Verification (p-value)  | 0.424   | 0.221             | 0.666            | 0.808          | 0.039   | 0.087            | 0.87             | 0.377             | 0.037                           | 0.355                             |
| $\tau_1 + \tau_2 = 0$ (p-value)                                       | 0.307   | 0.321             | 0.226            | 0.929          | 0.231   | 0.323            | 0.669            | 0.468             | 0.319                           | 0.822                             |
| R <sup>2</sup>  | 0.499   | 0.497             | 0.424            | 0.426          | 0.519   | 0.476            | 0.452            | 0.445             | 0.439                           | 0.501                             |
| <b>Panel C: Treatment effects with covariates selected with LASSO</b> |   |                   |                  |                |   |                  |                  |                   |                                 |                                   |
| <b>Panel C.1: Sample course Delivery Online</b>                       |   |                   |                  |                |   |                  |                  |                   |                                 |                                   |
| Course and verification   | 0.393** (0.169)   | -0.289** (0.141)  | -0.265** (0.132) | -0.147 (0.154) | -0.189 (0.156)  | 0.024 (0.121)    | 0.097 (0.132)    | -0.157 (0.124)    | -0.024 (0.246)                  | -0.161 (0.203)                    |
| Course  | -0.042 (0.193)  | -0.146 (0.172)    | -0.246* (0.132)  | 0.154 (0.183)  | 0.221 (0.174)   | 0.248* (0.137)   | 0.009 (0.126)    | -0.119 (0.133)    | 0.642** (0.250)                 | 0.417* (0.222)                    |
| Verification  | -0.043 (0.147)  | -0.196 (0.125)    | -0.155 (0.106)   | 0.154 (0.131)  | -0.194 (0.159)  | 0.020 (0.105)    | -0.145 (0.108)   | -0.346*** (0.115) | 0.383* (0.225)                  | 0.002 (0.196)                     |
| Course and Verification (p-value)                                     | 0.021   | 0.041             | 0.046            | 0.341          | 0.225   | 0.845            | 0.465            | 0.206             | 0.922                           | 0.427                             |
| Course (p-value)  | 0.826   | 0.396             | 0.063            | 0.4            | 0.204   | 0.071            | 0.94             | 0.071             | 0.011                           | 0.061                             |
| Verification (p-value)  | 0.769   | 0.118             | 0.143            | 0.241          | 0.223   | 0.853            | 0.179            | 0.003             | 0.09                            | 0.991                             |
| $\tau_1 = 0$ (p-value)  | 0.0804  | 0.2508            | 0.2193           | 0.2281         | 0.1897  | 0.4045           | 0.457            | 0.0951            | 0.116                           | 0.2775                            |
| <b>C.2 Sample Course Delivery WhatsApp</b>                            |   |                   |                  |                |   |                  |                  |                   |                                 |                                   |
| Course and verification   | 0.064 (0.130)   | -0.250*** (0.091) | -0.007 (0.101)   | 0.033 (0.110)  | 0.327** (0.131)   | 0.141 (0.099)    | 0.165 (0.101)    | 0.120 (0.109)     | 0.222 (0.184)                   | 0.092 (0.160)                     |
| Course  | -0.207 (0.134)  | 0.041 (0.098)     | 0.218* (0.111)   | 0.049 (0.115)  | 0.234 (0.146)   | 0.277*** (0.103) | 0.059 (0.110)    | 0.119 (0.111)     | 0.144 (0.182)                   | 0.228 (0.156)                     |
| Verification  | 0.047 (0.136)   | -0.083 (0.107)    | 0.039 (0.113)    | -0.000 (0.108) | 0.279** (0.126)   | 0.227** (0.102)  | 0.024 (0.114)    | 0.019 (0.105)     | 0.397* (0.204)                  | 0.192 (0.180)                     |
| Course and Verification (p-value)                                     | 0.623   | 0.007             | 0.947            | 0.763          | 0.013   | 0.155            | 0.102            | 0.272             | 0.229                           | 0.565                             |
| Course (p-value)  | 0.125   | 0.676             | 0.051            | 0.672          | 0.11  | 0.008            | 0.594            | 0.287             | 0.431                           | 0.145                             |
| Verification (p-value)  | 0.733   | 0.441             | 0.727            | 0.997          | 0.028   | 0.026            | 0.831            | 0.854             | 0.053                           | 0.288                             |
| $\tau_1 + \tau_2 = 0$ (p-value)                                       | 0.416   | 0.18              | 0.311            | 0.985          | 0.248   | 0.177            | 0.654            | 0.732             | 0.555                           | 0.775                             |
| Outcome mean  | 0   | 2.391             | 2.244            | 3.263          | 0   | 3.716            | 3.495            | 3.168             | 3.886                           | 3.743                             |
| Outcome std. dev.   | 1   | 0.806             | 0.741            | 0.77           | 1   | 0.777            | 0.744            | 0.746             | 1.308                           | 1.212                             |
| Outcome range   | [-4,1,3,1]  | [1,5]             | [1,5]            | [1,5]          | [-3,8,2,5]  | [1,5]            | [1,5]            | [1,5]             | [1,5]                           | [1,5]                             |
| Num. LASSO covariates   | 2   | 9                 | 11               | 1              | 8   | 15               | 9                | 55                | 57                              | 57                                |
| Observations  | 463   | 463               | 463              | 463            | 463   | 463              | 463              | 463               | 463                             | 463                               |
| R <sup>2</sup>  | 0.531   | 0.499             | 0.495            | 0.390          | 0.530   | 0.555            | 0.426            | 0.475             | 0.527                           | 0.565                             |

Notes: We report estimates from OLS regression including randomization block fixed effects. All specifications in all panels include the corresponding outcome variables at baseline as a control. Specifications in Panel A and B further include covariates in the outcome family as controls. Specifications in Panel A and B further include covariates in the outcome family as controls. Specifications in Panel C are from a 10-fold cross validation LASSO model with lambda chosen to be that of the minimum average cross-validated error. The treatment indicators, lagged dependent variable, and fixed effects are forced into the LASSO model and covariates are selected from a pool of 72 baseline variables for each specification. Robust standard errors are in parentheses.  $\tau_1$  is the vector of parameters for the treatment groups in the Online sample, and  $\tau_1 + \tau_2$  captures the effect for the WhatsApp sample as in equation S1. †: imagine you received an audio that came to you on WhatsApp with a screenshot of the Twitter account of a well-known person saying something very controversial. ††: imagine you received an audio that came to you by WhatsApp reporting evidence of corruption of a politician that you already suspected and you did not like. \* denotes  $p < 0.1$ , \*\* denotes  $p < 0.05$ , and \*\*\* denotes  $p < 0.01$ .

Table S16: Treatment effects on mechanisms: Distrust index's components

| Panel A: Treatment effects with covariates in the outcome family      |  |                    |                    |                      |   |                     |                     |                      |
|---|--|--------------------|--------------------|----------------------|---|---------------------|---------------------|----------------------|
|   | Trust<br>traditional<br>sources index<br>of (1,1,1)<br>(1) | Radio / TV<br>(2)  | Newspaper<br>(3)   | Internet<br>(4)      | Distrust<br>social media<br>sources index<br>of (-1,-1,-1)<br>(5) | WhatsApp<br>(6)     | Social media<br>(7) | Conversations<br>(8) |
| <b>A.1 Sample course Delivery Online</b>                              |  |                    |                    |                      |   |                     |                     |                      |
| Course and verification   | -0.036<br>(0.178)  | -0.161<br>(0.209)  | 0.122<br>(0.212)   | -0.010<br>(0.184)    | -0.046<br>(0.187)   | 0.058<br>(0.184)    | 0.111<br>(0.200)    | -0.039<br>(0.165)    |
| Course  | -0.203<br>(0.177)  | 0.006<br>(0.217)   | 0.352*<br>(0.205)  | -0.625***<br>(0.206) | 0.075<br>(0.188)  | 0.099<br>(0.190)    | -0.069<br>(0.207)   | -0.186<br>(0.174)    |
| Verification  | -0.126<br>(0.164)  | 0.126<br>(0.180)   | -0.136<br>(0.175)  | -0.216<br>(0.184)    | -0.083<br>(0.190)   | 0.266<br>(0.187)    | -0.046<br>(0.189)   | 0.014<br>(0.175)     |
| Course and Verification (p-value)                                     | 0.84   | 0.441              | 0.564              | 0.956                | 0.805   | 0.754               | 0.579               | 0.812                |
| Course (p-value)  | 0.253  | 0.979              | 0.087              | 0.003                | 0.691   | 0.602               | 0.738               | 0.287                |
| Verification (p-value)  | 0.445  | 0.483              | 0.436              | 0.241                | 0.663   | 0.156               | 0.809               | 0.937                |
| $\tau_1 = 0$ (p-value)  | 0.7582   | 0.6743             | 0.2526             | 0.0464               | 0.9098  | 0.5169              | 0.8766              | 0.8239               |
| <b>A.2 Sample Course Delivery WhatsApp</b>                            |  |                    |                    |                      |   |                     |                     |                      |
| Course and verification   | 0.097<br>(0.138)   | 0.294*<br>(0.166)  | -0.103<br>(0.161)  | 0.111<br>(0.165)     | 0.109<br>(0.137)  | -0.306**<br>(0.128) | 0.108<br>(0.141)    | -0.074<br>(0.151)    |
| Course  | 0.050<br>(0.140)   | 0.112<br>(0.163)   | 0.012<br>(0.159)   | 0.038<br>(0.171)     | 0.343**<br>(0.149)  | -0.299**<br>(0.129) | -0.172<br>(0.151)   | -0.347**<br>(0.166)  |
| Verification  | 0.002<br>(0.151)   | 0.155<br>(0.170)   | 0.065<br>(0.145)   | -0.106<br>(0.188)    | 0.227*<br>(0.136)   | -0.232*<br>(0.127)  | 0.032<br>(0.157)    | -0.346**<br>(0.152)  |
| Course and Verification (p-value)                                     | 0.481  | 0.079              | 0.521              | 0.5                  | 0.425   | 0.017               | 0.443               | 0.625                |
| Course (p-value)  | 0.72   | 0.495              | 0.94               | 0.826                | 0.022   | 0.836               | 0.257               | 0.038                |
| Verification (p-value)  | 0.988  | 0.363              | 0.655              | 0.571                | 0.095   | 0.069               | 0.839               | 0.024                |
| $\tau_1 + \tau_2 = 0$ (p-value)                                       | 0.943  | 0.565              | 0.889              | 0.797                | 0.287   | 0.268               | 0.582               | 0.155                |
| R <sup>2</sup>  | 0.491  | 0.456              | 0.451              | 0.464                | 0.456   | 0.418               | 0.449               | 0.480                |
| <b>Panel B: IPSW with covariates in the outcome family</b>            |  |                    |                    |                      |   |                     |                     |                      |
| <b>Panel B.1: Sample course Delivery Online</b>                       |  |                    |                    |                      |   |                     |                     |                      |
| Course and verification   | -0.026<br>(0.178)  | -0.108<br>(0.212)  | 0.183<br>(0.209)   | -0.072<br>(0.186)    | -0.038<br>(0.182)   | 0.020<br>(0.180)    | 0.123<br>(0.198)    | -0.023<br>(0.161)    |
| Course  | -0.185<br>(0.175)  | 0.071<br>(0.216)   | 0.423**<br>(0.199) | -0.679***<br>(0.214) | 0.093<br>(0.181)  | 0.032<br>(0.184)    | -0.033<br>(0.204)   | -0.200<br>(0.167)    |
| Verification  | -0.148<br>(0.171)  | 0.150<br>(0.190)   | -0.126<br>(0.179)  | -0.272<br>(0.190)    | -0.048<br>(0.189)   | 0.197<br>(0.187)    | -0.069<br>(0.193)   | 0.034<br>(0.175)     |
| Course and Verification (p-value)                                     | 0.884  | 0.61               | 0.381              | 0.7                  | 0.836   | 0.912               | 0.535               | 0.885                |
| Course (p-value)  | 0.291  | 0.742              | 0.035              | 0.002                | 0.607   | 0.863               | 0.87                | 0.232                |
| Verification (p-value)  | 0.388  | 0.429              | 0.482              | 0.153                | 0.798   | 0.291               | 0.72                | 0.847                |
| $\tau_1 = 0$ (p-value)  | 0.7676   | 0.7573             | 0.1578             | 0.0285               | 0.9264  | 0.7582              | 0.8557              | 0.7589               |
| <b>B.2 Sample Course Delivery WhatsApp</b>                            |  |                    |                    |                      |   |                     |                     |                      |
| Course and verification   | 0.096<br>(0.140)   | 0.291*<br>(0.172)  | -0.152<br>(0.171)  | 0.140<br>(0.167)     | 0.112<br>(0.140)  | -0.322**<br>(0.127) | 0.089<br>(0.147)    | -0.036<br>(0.157)    |
| Course  | 0.063<br>(0.143)   | 0.120<br>(0.170)   | -0.014<br>(0.166)  | 0.074<br>(0.174)     | 0.358**<br>(0.149)  | -0.310**<br>(0.128) | -0.205<br>(0.152)   | -0.343**<br>(0.170)  |
| Verification  | 0.042<br>(0.149)   | 0.185<br>(0.173)   | 0.038<br>(0.151)   | -0.030<br>(0.190)    | 0.199<br>(0.136)  | -0.258**<br>(0.124) | 0.058<br>(0.151)    | -0.276*<br>(0.160)   |
| Course and Verification (p-value)                                     | 0.492  | 0.09               | 0.374              | 0.404                | 0.423   | 0.012               | 0.543               | 0.816                |
| Course (p-value)  | 0.658  | 0.481              | 0.933              | 0.672                | 0.017   | 0.016               | 0.177               | 0.045                |
| Verification (p-value)  | 0.777  | 0.285              | 0.803              | 0.876                | 0.145   | 0.038               | 0.703               | 0.086                |
| $\tau_1 + \tau_2 = 0$ (p-value)                                       | 0.952  | 0.535              | 0.784              | 0.824                | 0.221   | 0.189               | 0.412               | 0.151                |
| R <sup>2</sup>  | 0.533  | 0.485              | 0.487              | 0.498                | 0.485   | 0.441               | 0.483               | 0.512                |
| <b>Panel C: Treatment effects with covariates selected with LASSO</b> |  |                    |                    |                      |   |                     |                     |                      |
| <b>Panel C.1: Sample course Delivery Online</b>                       |  |                    |                    |                      |   |                     |                     |                      |
| Course and verification   | 0.028<br>(0.179)   | -0.088<br>(0.206)  | 0.087<br>(0.205)   | 0.051<br>(0.185)     | 0.003<br>(0.183)  | 0.071<br>(0.181)    | 0.050<br>(0.200)    | -0.008<br>(0.167)    |
| Course  | -0.180<br>(0.175)  | 0.118<br>(0.206)   | 0.377*<br>(0.202)  | -0.635***<br>(0.206) | 0.097<br>(0.187)  | 0.014<br>(0.184)    | -0.148<br>(0.216)   | -0.183<br>(0.174)    |
| Verification  | -0.113<br>(0.157)  | 0.101<br>(0.166)   | -0.129<br>(0.166)  | -0.212<br>(0.181)    | -0.128<br>(0.186)   | 0.163<br>(0.189)    | -0.023<br>(0.185)   | 0.088<br>(0.177)     |
| Course and Verification (p-value)                                     | 0.875  | 0.67               | 0.673              | 0.783                | 0.988   | 0.696               | 0.804               | 0.961                |
| Course (p-value)  | 0.303  | 0.568              | 0.063              | 0.002                | 0.604   | 0.939               | 0.493               | 0.293                |
| Verification (p-value)  | 0.474  | 0.543              | 0.436              | 0.241                | 0.49  | 0.389               | 0.9                 | 0.618                |
| $\tau_1 = 0$ (p-value)  | 0.7066   | 0.7874             | 0.2152             | 0.0225               | 0.7655  | 0.8049              | 0.882               | 0.6898               |
| <b>C.2 Sample Course Delivery WhatsApp</b>                            |  |                    |                    |                      |   |                     |                     |                      |
| Course and verification   | 0.149<br>(0.135)   | 0.386**<br>(0.160) | -0.088<br>(0.162)  | 0.136<br>(0.162)     | 0.165<br>(0.136)  | -0.214*<br>(0.116)  | 0.035<br>(0.142)    | -0.092<br>(0.146)    |
| Course  | 0.102<br>(0.134)   | 0.148<br>(0.151)   | -0.007<br>(0.161)  | 0.060<br>(0.168)     | 0.390***<br>(0.142)   | -0.302**<br>(0.118) | -0.190<br>(0.148)   | -0.340**<br>(0.164)  |
| Verification  | 0.013<br>(0.146)   | 0.136<br>(0.161)   | 0.074<br>(0.148)   | -0.097<br>(0.184)    | 0.266*<br>(0.136)   | -0.226*<br>(0.115)  | 0.013<br>(0.159)    | -0.346**<br>(0.151)  |
| Course and Verification (p-value)                                     | 0.27   | 0.016              | 0.588              | 0.402                | 0.224   | 0.066               | 0.808               | 0.53                 |
| Course (p-value)  | 0.445  | 0.331              | 0.964              | 0.719                | 0.006   | 0.011               | 0.2                 | 0.039                |
| Verification (p-value)  | 0.932  | 0.397              | 0.62               | 0.599                | 0.052   | 0.051               | 0.937               | 0.023                |
| $\tau_1 + \tau_2 = 0$ (p-value)                                       | 0.805  | 0.256              | 0.903              | 0.738                | 0.187   | 0.319               | 0.683               | 0.171                |
| Outcome mean  | 0  | 3.505              | 3.778              | 2.497                | 0   | 1.937               | 2.33                | 2.641                |
| Outcome std. dev.   | 1  | 1.137              | 1.113              | 1.111                | 1   | 0.939               | 1.08                | 1.041                |
| Outcome range   | [-2.6,2.2]   | [1.5]              | [1.5]              | [1.5]                | [-3.4,1.7]  | [1.5]               | [1.5]               | [1.5]                |
| Num. LASSO covariates   | 2  | 7                  | 1                  | 1                    | 1   | 7                   | 0                   | 1                    |
| Observations  | 463  | 463                | 463                | 463                  | 463   | 463                 | 463                 | 463                  |
| R <sup>2</sup>  | 0.508  | 0.521              | 0.459              | 0.465                | 0.451   | 0.468               | 0.431               | 0.470                |

Notes: We report estimates from OLS regression including randomization block fixed effects. All specifications in all panels include the corresponding outcome variables at baseline as a control. Specifications in Panel A and B further include covariates in the outcome family as controls. Specifications in Panel A and B further include covariates in the outcome family as controls. Specifications in Panel C are from a 10-fold cross validation LASSO model with lambda chosen to be that of the minimum average cross-validated error. The treatment indicators, lagged dependent variable, and fixed effects are forced into the LASSO model and covariates are selected from a pool of 72 baseline variables for each specification. Robust standard errors are in parentheses.  $\tau_1$  is the vector of parameters for the treatment groups in the Online sample, and  $\tau_1 + \tau_2$  captures the effect for the WhatsApp sample as in equation S1. \* denotes  $p < 0.1$ , \*\* denotes  $p < 0.05$ , and \*\*\* denotes  $p < 0.01$ .

Table S17: Treatment effects on mechanisms: Attention to misinformation index's components

| <b>Panel A: Treatment effects with covariates in the outcome family</b> |  |   |
|---|--|---|
|   | Attention to<br>misinformation<br>index<br>of (1)<br>(1) | How often<br>do you question<br>wether a<br>news is false<br>(2)<br>(2) |
| <b>A.1 Sample course Delivery Online</b>                                |  |   |
| Course and verification   | 0.218<br>(0.173)   | 0.177<br>(0.140)  |
| Course  | 0.090<br>(0.171)   | 0.073<br>(0.139)  |
| Verification  | 0.226<br>(0.155)   | 0.183<br>(0.126)  |
| Course and Verification (p-value)                                       | 0.208  | 0.208   |
| Course (p-value)  | 0.598  | 0.598   |
| Verification (p-value)  | 0.148  | 0.148   |
| $\tau_1 = 0$ (p-value)  | 0.5199   | 0.5199  |
| <b>A.2 Sample Course Delivery WhatsApp</b>                              |  |   |
| Course and verification   | 0.297**<br>(0.127)                                       | 0.241**<br>(0.103)  |
| Course  | 0.162<br>(0.134)   | 0.131<br>(0.108)  |
| Verification  | 0.114<br>(0.129)   | 0.092<br>(0.105)  |
| Course and Verification (p-value)                                       | 0.02   | 0.02  |
| Course (p-value)  | 0.227  | 0.227   |
| Verification (p-value)  | 0.379  | 0.379   |
| $\tau_1 + \tau_2 = 0$ (p-value)   | 0.358  | 0.358   |
| R <sup>2</sup>  | 0.543  | 0.543   |
| <b>Panel B: IPSW with covariates in the outcome family</b>              |  |   |
| <b>Panel B.1: Sample course Delivery Online</b>                         |  |   |
| Course and verification   | 0.247<br>(0.175)   | 0.200<br>(0.142)  |
| Course  | 0.118<br>(0.168)   | 0.096<br>(0.136)  |
| Verification  | 0.271*<br>(0.161)  | 0.219*<br>(0.130)   |
| Course and Verification (p-value)                                       | 0.16   | 0.16  |
| Course (p-value)  | 0.483  | 0.483   |
| Verification (p-value)  | 0.093  | 0.093   |
| $\tau_1 = 0$ (p-value)  | 0.4635   | 0.4635  |
| <b>B.2 Sample Course Delivery WhatsApp</b>                              |  |   |
| Course and verification   | 0.322**<br>(0.131)                                       | 0.261**<br>(0.106)  |
| Course  | 0.178<br>(0.133)   | 0.144<br>(0.108)  |
| Verification  | 0.133<br>(0.131)   | 0.108<br>(0.107)  |
| Course and Verification (p-value)                                       | 0.014  | 0.014   |
| Course (p-value)  | 0.183  | 0.183   |
| Verification (p-value)  | 0.313  | 0.313   |
| $\tau_1 + \tau_2 = 0$ (p-value)   | 0.234  | 0.234   |
| R <sup>2</sup>  | 0.589  | 0.589   |
| <b>Panel C: Treatment effects with covariates selected with LASSO</b>   |  |   |
| <b>Panel C.1: Sample course Delivery Online</b>                         |  |   |
| Course and verification   | 0.195<br>(0.172)   | 0.158<br>(0.139)  |
| Course  | 0.116<br>(0.172)   | 0.094<br>(0.140)  |
| Verification  | 0.220<br>(0.154)   | 0.178<br>(0.125)  |
| Course and Verification (p-value)                                       | 0.257  | 0.257   |
| Course (p-value)  | 0.501  | 0.501   |
| Verification (p-value)  | 0.155  | 0.155   |
| $\tau_1 = 0$ (p-value)  | 0.5724   | 0.5724  |
| <b>C.2 Sample Course Delivery WhatsApp</b>                              |  |   |
| Course and verification   | 0.267**<br>(0.129)                                       | 0.216**<br>(0.105)  |
| Course  | 0.119<br>(0.143)   | 0.096<br>(0.115)  |
| Verification  | 0.099<br>(0.133)   | 0.080<br>(0.108)  |
| Course and Verification (p-value)                                       | 0.04   | 0.04  |
| Course (p-value)  | 0.405  | 0.405   |
| Verification (p-value)  | 0.459  | 0.459   |
| $\tau_1 + \tau_2 = 0$ (p-value)   | 0.458  | 0.458   |
| Outcome mean  | 0  | 3.901   |
| Outcome std. dev.   | 1  | 0.81  |
| Outcome range   | [-3.6,1.4]   | [1,5]   |
| Num. LASSO covariates   | 0  | 0   |
| Observations  | 463  | 463   |
| R <sup>2</sup>  | 0.523  | 0.523   |

Notes: We report estimates from OLS regression including randomization block fixed effects. All specifications in all panels include the corresponding outcome variables at baseline as a control. Specifications in Panel A and B further include covariates in the outcome family as controls. Specifications in Panel A and B further include covariates in the outcome family as controls. Specifications in Panel C are from a 10-fold cross validation LASSO model with lambda chosen to be that of the minimum average cross-validated error. The treatment indicators, lagged dependent variable, and fixed effects are forced into the LASSO model and covariates are selected from a pool of 72 baseline variables for each specification. Robust standard errors are in parentheses.  $\tau_1$  is the vector of parameters for the treatment groups in the Online sample, and  $\tau_1 + \tau_2$  captures the effect for the WhatsApp sample as in equation S1. \* denotes  $p < 0.1$ , \*\* denotes  $p < 0.05$ , and \*\*\* denotes  $p < 0.01$ .

Table S18: Treatment effects on knowledge to identify information index's components

| Panel A: Treatment effects with covariates in the outcome family      |  |  |   |  |                     |                   |                   |                     |                    |                    |
|---|--|--|---|--|---------------------|-------------------|-------------------|---------------------|--------------------|--------------------|
|   | Increase knowledge to identify information index of (1,1,1,-1,-1,-1,1,1,1) (1) | How much knowledge do you have to identify whether a news is false or not? (2) | Knowing how to identify a fake news index (3) | How many recent misinformation cases in Bolivia do you know? (4) | Radio / TV (5)      | Newspaper (6)     | Internet (7)      | WhatsApp (8)        | Social media (9)   | Conversations (10) |
| <b>A.1 Sample course Delivery Online</b>                              |  |  |   |  |                     |                   |                   |                     |                    |                    |
| Course and verification   | 0.197<br>(0.174)   | 0.414***<br>(0.128)  | -0.073<br>(0.056)                             | 0.190<br>(0.318)   | -0.089*<br>(0.051)  | -0.028<br>(0.057) | -0.038<br>(0.094) | -0.146**<br>(0.070) | 0.026<br>(0.073)   | -0.036<br>(0.089)  |
| Course  | 0.245<br>(0.193)   | 0.316**<br>(0.140)   | 0.012<br>(0.062)                              | 0.132<br>(0.275)   | -0.029<br>(0.064)   | -0.074<br>(0.065) | -0.029<br>(0.102) | -0.035<br>(0.066)   | 0.064<br>(0.065)   | -0.044<br>(0.096)  |
| Verification  | -0.036<br>(0.160)  | -0.083<br>(0.120)  | -0.173***<br>(0.061)                          | 0.063<br>(0.261)   | -0.036<br>(0.049)   | -0.006<br>(0.049) | -0.021<br>(0.088) | 0.071<br>(0.048)    | 0.030<br>(0.066)   | 0.094<br>(0.080)   |
| Course and Verification (p-value)                                     | 0.259  | 0.001  | 0.19  | 0.55   | 0.085               | 0.632             | 0.688             | 0.037               | 0.721              | 0.688              |
| Course (p-value)  | 0.206  | 0.025  | 0.851   | 0.633  | 0.646               | 0.25              | 0.78              | 0.592               | 0.329              | 0.65               |
| Verification (p-value)  | 0.823  | 0.487  | 0.005   | 0.808  | 0.465               | 0.907             | 0.814             | 0.14                | 0.649              | 0.244              |
| $\tau_1 = 0$ (p-value)  | 0.4464   | 0.0012   | 0.0131  | 0.9523   | 0.6346              | 0.7603            | 0.9857            | 0.029               | 0.8648             | 0.5474             |
| <b>A.2 Sample Course Delivery WhatsApp</b>                            |  |  |   |  |                     |                   |                   |                     |                    |                    |
| Course and verification   | 0.076<br>(0.145)   | 0.178*<br>(0.097)  | -0.013<br>(0.043)                             | 0.826***<br>(0.262)  | -0.051<br>(0.058)   | -0.045<br>(0.054) | 0.112<br>(0.077)  | -0.001<br>(0.058)   | -0.065<br>(0.043)  | 0.005<br>(0.075)   |
| Course  | 0.072<br>(0.144)   | 0.210**<br>(0.087)   | -0.042<br>(0.037)                             | 0.378<br>(0.282)   | -0.019<br>(0.052)   | 0.029<br>(0.051)  | 0.029<br>(0.080)  | -0.012<br>(0.051)   | 0.047<br>(0.040)   | -0.012<br>(0.076)  |
| Verification  | 0.025<br>(0.165)   | -0.102<br>(0.110)  | 0.012<br>(0.041)                              | 0.374<br>(0.290)   | 0.020<br>(0.065)    | 0.009<br>(0.052)  | -0.040<br>(0.077) | -0.012<br>(0.055)   | -0.091*<br>(0.054) | 0.024<br>(0.081)   |
| Course and Verification (p-value)                                     | 0.6  | 0.068  | 0.756   | 0.002  | 0.384               | 0.407             | 0.144             | 0.981               | 0.135              | 0.95               |
| Course (p-value)  | 0.616  | 0.017  | 0.264   | 0.182  | 0.72                | 0.572             | 0.713             | 0.813               | 0.237              | 0.877              |
| Verification (p-value)  | 0.88   | 0.351  | 0.762   | 0.198  | 0.761               | 0.861             | 0.604             | 0.828               | 0.091              | 0.768              |
| $\tau_1 + \tau_2 = 0$ (p-value)                                       | 0.97   | 0.092  | 0.833   | 0.086  | 0.756               | 0.706             | 0.509             | 0.997               | 0.192              | 0.989              |
| R <sup>2</sup>  | 0.450  | 0.575  | 0.474   | 0.454  | 0.347               | 0.380             | 0.338             | 0.484               | 0.391              | 0.414              |
| <b>Panel B: IPSW with covariates in the outcome family</b>            |  |  |   |  |                     |                   |                   |                     |                    |                    |
| <b>Panel B.1: Sample course Delivery Online</b>                       |  |  |   |  |                     |                   |                   |                     |                    |                    |
| Course and verification   | 0.186<br>(0.172)   | 0.408***<br>(0.129)  | -0.085<br>(0.055)                             | 0.213<br>(0.305)   | -0.086<br>(0.053)   | -0.025<br>(0.056) | -0.060<br>(0.097) | -0.169**<br>(0.071) | 0.021<br>(0.071)   | -0.057<br>(0.091)  |
| Course  | 0.228<br>(0.190)   | 0.370***<br>(0.136)  | -0.016<br>(0.061)                             | 0.188<br>(0.257)   | -0.035<br>(0.061)   | -0.071<br>(0.060) | -0.004<br>(0.099) | -0.033<br>(0.067)   | 0.082<br>(0.060)   | -0.051<br>(0.099)  |
| Verification  | -0.008<br>(0.165)  | -0.068<br>(0.120)  | -0.175***<br>(0.059)                          | 0.115<br>(0.262)   | -0.050<br>(0.051)   | 0.003<br>(0.049)  | -0.036<br>(0.091) | 0.067<br>(0.053)    | 0.043<br>(0.065)   | 0.072<br>(0.086)   |
| Course and Verification (p-value)                                     | 0.28   | 0.002  | 0.125   | 0.484  | 0.104               | 0.654             | 0.541             | 0.018               | 0.767              | 0.533              |
| Course (p-value)  | 0.23   | 0.007  | 0.786   | 0.464  | 0.562               | 0.238             | 0.969             | 0.623               | 0.176              | 0.607              |
| Verification (p-value)  | 0.963  | 0.574  | 0.003   | 0.661  | 0.33                | 0.95              | 0.69              | 0.205               | 0.508              | 0.4                |
| $\tau_1 = 0$ (p-value)  | 0.5833   | 0.0018   | 0.0325  | 0.9384   | 0.7236              | 0.7585            | 0.9513            | 0.024               | 0.7336             | 0.648              |
| <b>B.2 Sample Course Delivery WhatsApp</b>                            |  |  |   |  |                     |                   |                   |                     |                    |                    |
| Course and verification   | 0.068<br>(0.147)   | 0.179*<br>(0.101)  | -0.025<br>(0.043)                             | 0.796***<br>(0.265)  | -0.048<br>(0.062)   | -0.023<br>(0.058) | 0.103<br>(0.077)  | -0.009<br>(0.059)   | -0.070<br>(0.044)  | 0.014<br>(0.076)   |
| Course  | 0.065<br>(0.147)   | 0.219**<br>(0.089)   | -0.047<br>(0.037)                             | 0.405<br>(0.285)   | -0.022<br>(0.058)   | 0.036<br>(0.053)  | 0.029<br>(0.081)  | -0.018<br>(0.054)   | 0.040<br>(0.042)   | -0.016<br>(0.078)  |
| Verification  | -0.015<br>(0.158)  | -0.073<br>(0.109)  | 0.012<br>(0.038)                              | 0.277<br>(0.292)   | 0.054<br>(0.069)    | 0.040<br>(0.055)  | -0.055<br>(0.075) | -0.025<br>(0.054)   | -0.101*<br>(0.054) | 0.010<br>(0.081)   |
| Course and Verification (p-value)                                     | 0.644  | 0.076  | 0.556   | 0.003  | 0.44                | 0.696             | 0.181             | 0.88                | 0.111              | 0.858              |
| Course (p-value)  | 0.657  | 0.015  | 0.2   | 0.157  | 0.707               | 0.497             | 0.722             | 0.738               | 0.335              | 0.839              |
| Verification (p-value)  | 0.924  | 0.504  | 0.748   | 0.344  | 0.432               | 0.47              | 0.463             | 0.656               | 0.061              | 0.902              |
| $\tau_1 + \tau_2 = 0$ (p-value)                                       | 0.949  | 0.069  | 0.689   | 0.074  | 0.434               | 0.689             | 0.412             | 0.983               | 0.106              | 0.989              |
| R <sup>2</sup>  | 0.487  | 0.590  | 0.518   | 0.503  | 0.379               | 0.405             | 0.378             | 0.531               | 0.443              | 0.442              |
| <b>Panel C: Treatment effects with covariates selected with LASSO</b> |  |  |   |  |                     |                   |                   |                     |                    |                    |
| <b>Panel C.1: Sample course Delivery Online</b>                       |  |  |   |  |                     |                   |                   |                     |                    |                    |
| Course and verification   | 0.212<br>(0.161)   | 0.369***<br>(0.115)  | -0.070<br>(0.056)                             | 0.010<br>(0.282)   | -0.136**<br>(0.054) | -0.033<br>(0.055) | -0.048<br>(0.086) | -0.148**<br>(0.070) | 0.001<br>(0.069)   | -0.036<br>(0.089)  |
| Course  | 0.374**<br>(0.183)   | 0.388***<br>(0.120)  | 0.024<br>(0.063)                              | 0.076<br>(0.280)   | -0.077<br>(0.058)   | -0.089<br>(0.062) | -0.108<br>(0.092) | -0.042<br>(0.066)   | 0.050<br>(0.063)   | -0.039<br>(0.094)  |
| Verification  | 0.039<br>(0.148)   | -0.036<br>(0.092)  | -0.157**<br>(0.061)                           | 0.038<br>(0.254)   | -0.050<br>(0.048)   | -0.036<br>(0.048) | -0.062<br>(0.079) | 0.074<br>(0.050)    | 0.050<br>(0.063)   | 0.122<br>(0.079)   |
| Course and Verification (p-value)                                     | 0.19   | 0.001  | 0.206   | 0.971  | 0.013               | 0.55              | 0.577             | 0.037               | 0.993              | 0.691              |
| Course (p-value)  | 0.042  | 0.001  | 0.702   | 0.785  | 0.183               | 0.152             | 0.24              | 0.527               | 0.434              | 0.677              |
| Verification (p-value)  | 0.795  | 0.698  | 0.011   | 0.881  | 0.295               | 0.461             | 0.429             | 0.143               | 0.432              | 0.121              |
| $\tau_1 = 0$ (p-value)  | 0.2219   | 0.001  | 0.0183  | 0.9966   | 0.228               | 0.6807            | 0.7782            | 0.0214              | 0.7906             | 0.3525             |
| <b>C.2 Sample Course Delivery WhatsApp</b>                            |  |  |   |  |                     |                   |                   |                     |                    |                    |
| Course and verification   | 0.092<br>(0.137)   | 0.198**<br>(0.098)   | -0.011<br>(0.041)                             | 0.652***<br>(0.247)  | -0.089<br>(0.059)   | -0.051<br>(0.057) | 0.080<br>(0.070)  | -0.006<br>(0.058)   | -0.082*<br>(0.041) | 0.012<br>(0.074)   |
| Course  | 0.129<br>(0.128)   | 0.291***<br>(0.086)  | -0.036<br>(0.036)                             | 0.220<br>(0.235)   | -0.047<br>(0.053)   | 0.016<br>(0.053)  | -0.000<br>(0.073) | -0.004<br>(0.051)   | 0.047<br>(0.038)   | 0.000<br>(0.074)   |
| Verification  | 0.080<br>(0.152)   | -0.036<br>(0.105)  | 0.020<br>(0.040)                              | 0.532*<br>(0.274)  | 0.007<br>(0.062)    | -0.014<br>(0.055) | -0.071<br>(0.073) | -0.005<br>(0.053)   | -0.078<br>(0.049)  | 0.042<br>(0.078)   |
| Course and Verification (p-value)                                     | 0.504  | 0.045  | 0.786   | 0.009  | 0.132               | 0.37              | 0.255             | 0.922               | 0.05               | 0.867              |
| Course (p-value)  | 0.317  | 0.001  | 0.317   | 0.351  | 0.378               | 0.758             | 0.998             | 0.93                | 0.216              | 0.996              |
| Verification (p-value)  | 0.6  | 0.729  | 0.619   | 0.053  | 0.912               | 0.805             | 0.331             | 0.922               | 0.107              | 0.591              |
| $\tau_1 + \tau_2 = 0$ (p-value)                                       | 0.892  | 0.03   | 0.835   | 0.135  | 0.404               | 0.745             | 0.526             | 1                   | 0.148              | 0.974              |
| Outcome mean  | 0  | 3.311  | 0.406   | 1.678  | 0.114               | 0.117             | 0.594             | 0.76                | 0.868              | 0.49               |
| Outcome std. dev.   | 1  | 0.818  | 0.318   | 1.781  | 0.319               | 0.321             | 0.492             | 0.373               | 0.339              | 0.5                |
| Outcome range   | [-3.3,2.5]   | [1,5]  | [-0.8,1]                                      | [0,5]  | [0,1]               | [0,1]             | [0,1]             | [0,1]               | [0,1]              | [0,1]              |
| Num. LASSO covariates   | 8  | 15   | 1   | 3  | 1                   | 15                | 1                 | 7                   | 1                  | 1                  |
| Observations  | 463  | 463  | 463   | 463  | 463                 | 463               | 463               | 463                 | 463                | 463                |
| R <sup>2</sup>  | 0.537  | 0.663  | 0.478   | 0.574  | 0.381               | 0.382             | 0.444             | 0.484               | 0.444              | 0.423              |

Notes: We report estimates from OLS regression including randomization block fixed effects. All specifications in all panels include the corresponding outcome variables at baseline as a control. Specifications in Panel A and B further include covariates in the outcome family as controls. Specifications in Panel A and B further include covariates in the outcome family as controls. Specifications in Panel C are from a 10-fold cross validation LASSO model with lambda chosen to be that of the minimum average cross-validated error. The treatment indicators, lagged dependent variable, and fixed effects are forced into the LASSO model and covariates are selected from a pool of 72 baseline variables for each specification. Robust standard errors are in parentheses.  $\tau_1$  is the vector of parameters for the treatment groups in the Online sample, and  $\tau_1 + \tau_2$  captures the effect for the WhatsApp sample as in equation S1. \* denotes  $p < 0.1$ , \*\* denotes  $p < 0.05$ , and \*\*\* denotes  $p < 0.01$ .

Table S19: Treatment effects on knowledge to verify information index's components

| <b>Panel A: Treatment effects with covariates in the outcome family</b> |   |   |  |  |
|---|---|---|--|--|
|   | Increase<br>knowledge to<br>verify<br>information<br>index<br>of (1,1,1)<br>(1) | How much<br>knowledge do you<br>have to verify<br>if a doubtful news<br>is false or not?<br>(2) | Main ways<br>to verify<br>news<br>index<br>(3) | How many<br>verifiers or<br>fact-checkers<br>do you know?<br>(4) |
| <b>A.1 Sample course Delivery Online</b>                                |   |   |  |  |
| Course and verification   | 0.606***<br>(0.133)   | 0.484***<br>(0.126)   | 0.127**<br>(0.055)                             | 0.390**<br>(0.165)   |
| Course  | 0.569***<br>(0.160)   | 0.391***<br>(0.133)   | 0.094<br>(0.064)                               | 0.535***<br>(0.185)  |
| Verification  | -0.004<br>(0.117)   | -0.012<br>(0.112)   | 0.037<br>(0.050)                               | -0.140<br>(0.130)  |
| Course and Verification (p-value)                                       | 0   | 0   | 0.023  | 0.019  |
| Course (p-value)  | 0   | 0.004   | 0.146  | 0.004  |
| Verification (p-value)  | 0.97  | 0.915   | 0.463  | 0.281  |
| $\tau_1 = 0$ (p-value)  | 0   | 1e-04   | 0.2215   | 0.0043   |
| <b>A.2 Sample Course Delivery WhatsApp</b>                              |   |   |  |  |
| Course and verification   | 0.154<br>(0.128)  | 0.125<br>(0.099)  | 0.034<br>(0.054)                               | 0.071<br>(0.149)   |
| Course  | 0.215*<br>(0.120)   | 0.283***<br>(0.089)   | 0.135***<br>(0.047)                            | -0.372**<br>(0.154)  |
| Verification  | 0.087<br>(0.133)  | 0.015<br>(0.099)  | 0.040<br>(0.048)                               | 0.012<br>(0.174)   |
| Course and Verification (p-value)                                       | 0.23  | 0.208   | 0.53   | 0.635  |
| Course (p-value)  | 0.075   | 0.002   | 0.004  | 0.016  |
| Verification (p-value)  | 0.514   | 0.879   | 0.408  | 0.947  |
| $\tau_1 + \tau_2 = 0$ (p-value)   | 0.552   | 0.117   | 0.173  | 0.089  |
| R <sup>2</sup>  | 0.604   | 0.637   | 0.468  | 0.554  |
| <b>Panel B: IPSW with covariates in the outcome family</b>              |   |   |  |  |
| <b>Panel B.1: Sample course Delivery Online</b>                         |   |   |  |  |
| Course and verification   | 0.624***<br>(0.138)   | 0.497***<br>(0.130)   | 0.131**<br>(0.058)                             | 0.410**<br>(0.169)   |
| Course  | 0.643***<br>(0.160)   | 0.478***<br>(0.133)   | 0.110*<br>(0.066)                              | 0.556***<br>(0.181)  |
| Verification  | 0.028<br>(0.124)  | 0.002<br>(0.113)  | 0.048<br>(0.053)                               | -0.117<br>(0.142)  |
| Course and Verification (p-value)                                       | 0   | 0   | 0.025  | 0.016  |
| Course (p-value)  | 0   | 0   | 0.095  | 0.002  |
| Verification (p-value)  | 0.819   | 0.984   | 0.365  | 0.409  |
| $\tau_1 = 0$ (p-value)  | 1e-04   | 1e-04   | 0.2509   | 0.007  |
| <b>B.2 Sample Course Delivery WhatsApp</b>                              |   |   |  |  |
| Course and verification   | 0.109<br>(0.128)  | 0.119<br>(0.106)  | 0.018<br>(0.058)                               | 0.018<br>(0.150)   |
| Course  | 0.221*<br>(0.120)   | 0.276***<br>(0.093)   | 0.141***<br>(0.048)                            | -0.377**<br>(0.158)  |
| Verification  | 0.064<br>(0.128)  | 0.004<br>(0.102)  | 0.053<br>(0.050)                               | -0.086<br>(0.173)  |
| Course and Verification (p-value)                                       | 0.398   | 0.263   | 0.757  | 0.902  |
| Course (p-value)  | 0.066   | 0.003   | 0.004  | 0.018  |
| Verification (p-value)  | 0.618   | 0.967   | 0.294  | 0.622  |
| $\tau_1 + \tau_2 = 0$ (p-value)   | 0.524   | 0.09  | 0.096  | 0.105  |
| R <sup>2</sup>  | 0.620   | 0.656   | 0.477  | 0.569  |
| <b>Panel C: Treatment effects with covariates selected with LASSO</b>   |   |   |  |  |
| <b>Panel C.1: Sample course Delivery Online</b>                         |   |   |  |  |
| Course and verification   | 0.573***<br>(0.135)   | 0.424***<br>(0.114)   | 0.138***<br>(0.052)                            | 0.388**<br>(0.157)   |
| Course  | 0.634***<br>(0.140)   | 0.440***<br>(0.120)   | 0.123**<br>(0.055)                             | 0.551***<br>(0.180)  |
| Verification  | -0.002<br>(0.111)   | -0.034<br>(0.101)   | 0.055<br>(0.045)                               | -0.119<br>(0.130)  |
| Course and Verification (p-value)                                       | 0   | 0   | 0.009  | 0.014  |
| Course (p-value)  | 0   | 0   | 0.026  | 0.002  |
| Verification (p-value)  | 0.989   | 0.736   | 0.222  | 0.357  |
| $\tau_1 = 0$ (p-value)  | 0   | 2e-04   | 0.1172   | 0.0042   |
| <b>C.2 Sample Course Delivery WhatsApp</b>                              |   |   |  |  |
| Course and verification   | 0.193<br>(0.120)  | 0.139<br>(0.098)  | 0.049<br>(0.050)                               | 0.159<br>(0.152)   |
| Course  | 0.235**<br>(0.116)  | 0.306***<br>(0.087)   | 0.127***<br>(0.047)                            | -0.345**<br>(0.155)  |
| Verification  | 0.045<br>(0.127)  | 0.024<br>(0.102)  | 0.014<br>(0.050)                               | 0.035<br>(0.181)   |
| Course and Verification (p-value)                                       | 0.11  | 0.158   | 0.336  | 0.296  |
| Course (p-value)  | 0.043   | 0   | 0.007  | 0.027  |
| Verification (p-value)  | 0.727   | 0.817   | 0.772  | 0.848  |
| $\tau_1 + \tau_2 = 0$ (p-value)   | 0.332   | 0.064   | 0.178  | 0.053  |
| Outcome mean  | 0   | 3.305   | 0.642  | 1.369  |
| Outcome std. dev.   | 1   | 0.848   | 0.343  | 1.122  |
| Outcome range   | [-3.3,2.1]  | [1,5]   | [-0.3,1]                                       | [0,3]  |
| Num. LASSO covariates   | 7   | 14  | 17   | 1  |
| Observations  | 463   | 463   | 463  | 463  |
| R <sup>2</sup>  | 0.656   | 0.682   | 0.538  | 0.556  |

Notes: We report estimates from OLS regression including randomization block fixed effects. All specifications in all panels include the corresponding outcome variables at baseline as a control. Specifications in Panel A and B further include covariates in the outcome family as controls. Specifications in Panel A and B further include covariates in the outcome family as controls. Specifications in Panel C are from a 10-fold cross validation LASSO model with lambda chosen to be that of the minimum average cross-validated error. The treatment indicators, lagged dependent variable, and fixed effects are forced into the LASSO model and covariates are selected from a pool of 72 baseline variables for each specification. Robust standard errors are in parentheses.  $\tau_1$  is the vector of parameters for the treatment groups in the Online sample, and  $\tau_1 + \tau_2$  captures the effect for the WhatsApp sample as in equation S1. \* denotes  $p < 0.1$ , \*\* denotes  $p < 0.05$ , and \*\*\* denotes  $p < 0.01$ .

Table S20: Treatment effects on consumption behavior index's components

| Panel A: Treatment effects with covariates in the outcome family      |   |                   |                   |                     |   |                      |                    |                      |
|---|---|-------------------|-------------------|---------------------|---|----------------------|--------------------|----------------------|
|   | Increase consumption behavior of traditional sources index of (1,1,1) (1) | Radio / TV (2)    | Newspaper (3)     | Internet (4)        | Decrease consumption behavior of social media sources index of (-1,-1,-1) (5) | WhatsApp (6)         | Social media (7)   | Conversations (8)    |
| <b>A.1 Sample course Delivery Online</b>                              |   |                   |                   |                     |   |                      |                    |                      |
| Course and verification   | 0.054<br>(0.154)  | -0.020<br>(0.222) | 0.048<br>(0.240)  | 0.132<br>(0.236)    | -0.228<br>(0.165)   | 0.650**<br>(0.292)   | -0.101<br>(0.172)  | 0.355<br>(0.220)     |
| Course  | -0.148<br>(0.177)   | 0.062<br>(0.217)  | -0.029<br>(0.260) | -0.525*<br>(0.293)  | -0.088<br>(0.157)   | 0.364<br>(0.277)     | -0.088<br>(0.186)  | 0.103<br>(0.226)     |
| Verification  | 0.143<br>(0.130)  | 0.273<br>(0.189)  | 0.181<br>(0.229)  | 0.072<br>(0.214)    | -0.258*<br>(0.151)  | 0.488*<br>(0.270)    | 0.104<br>(0.154)   | 0.256<br>(0.191)     |
| Course and Verification (p-value)                                     | 0.724   | 0.929             | 0.841             | 0.577               | 0.169   | 0.027                | 0.56               | 0.107                |
| Course (p-value)  | 0.405   | 0.777             | 0.912             | 0.074               | 0.574   | 0.191                | 0.637              | 0.648                |
| Verification (p-value)  | 0.275   | 0.149             | 0.431             | 0.738               | 0.087   | 0.072                | 0.502              | 0.182                |
| $\tau_1 = 0$ (p-value)  | 0.6252  | 0.7105            | 0.8978            | 0.2504              | 0.4284  | 0.0992               | 0.7991             | 0.527                |
| <b>A.2 Sample Course Delivery WhatsApp</b>                            |   |                   |                   |                     |   |                      |                    |                      |
| Course and verification   | -0.191<br>(0.159)   | -0.213<br>(0.238) | -0.157<br>(0.209) | -0.278<br>(0.226)   | 0.269*<br>(0.145)   | -0.364*<br>(0.191)   | -0.295*<br>(0.171) | -0.166<br>(0.215)    |
| Course  | -0.081<br>(0.171)   | 0.338<br>(0.251)  | -0.034<br>(0.231) | -0.554**<br>(0.232) | 0.364***<br>(0.120)   | -0.456**<br>(0.184)  | -0.200<br>(0.162)  | -0.506***<br>(0.186) |
| Verification  | -0.069<br>(0.154)   | 0.092<br>(0.222)  | 0.034<br>(0.223)  | -0.292<br>(0.266)   | 0.464***<br>(0.138)   | -0.448**<br>(0.195)  | -0.220<br>(0.184)  | -0.795***<br>(0.191) |
| Course and Verification (p-value)                                     | 0.232   | 0.371             | 0.454             | 0.218               | 0.065   | 0.058                | 0.086              | 0.44                 |
| Course (p-value)  | 0.634   | 0.178             | 0.884             | 0.018               | 0.003   | 0.014                | 0.217              | 0.007                |
| Verification (p-value)  | 0.657   | 0.681             | 0.878             | 0.275               | 0.001   | 0.022                | 0.234              | 0                    |
| $\tau_1 + \tau_2 = 0$ (p-value)                                       | 0.772   | 0.244             | 0.909             | 0.288               | 0.053   | 0.261                | 0.511              | 0.01                 |
| R <sup>2</sup>  | 0.457   | 0.489             | 0.455             | 0.439               | 0.531   | 0.527                | 0.506              | 0.471                |
| <b>Panel B: IPSW with covariates in the outcome family</b>            |   |                   |                   |                     |   |                      |                    |                      |
| <b>Panel B.1: Sample course Delivery Online</b>                       |   |                   |                   |                     |   |                      |                    |                      |
| Course and verification   | 0.059<br>(0.160)  | 0.052<br>(0.223)  | 0.012<br>(0.247)  | 0.115<br>(0.249)    | -0.218<br>(0.170)   | 0.649**<br>(0.298)   | -0.106<br>(0.179)  | 0.313<br>(0.217)     |
| Course  | -0.199<br>(0.182)   | 0.001<br>(0.217)  | -0.114<br>(0.282) | -0.545*<br>(0.283)  | -0.055<br>(0.158)   | 0.350<br>(0.282)     | -0.113<br>(0.191)  | 0.035<br>(0.208)     |
| Verification  | 0.146<br>(0.137)  | 0.334*<br>(0.197) | 0.123<br>(0.234)  | 0.081<br>(0.227)    | -0.264*<br>(0.155)  | 0.503*<br>(0.273)    | 0.101<br>(0.162)   | 0.262<br>(0.198)     |
| Course and Verification (p-value)                                     | 0.714   | 0.817             | 0.963             | 0.646               | 0.2   | 0.03                 | 0.553              | 0.15                 |
| Course (p-value)  | 0.276   | 0.997             | 0.686             | 0.055               | 0.726   | 0.215                | 0.555              | 0.868                |
| Verification (p-value)  | 0.289   | 0.092             | 0.599             | 0.721               | 0.09  | 0.066                | 0.536              | 0.187                |
| $\tau_1 = 0$ (p-value)  | 0.52  | 0.689             | 0.922             | 0.2211              | 0.5052  | 0.1498               | 0.8105             | 0.6054               |
| <b>B.2 Sample Course Delivery WhatsApp</b>                            |   |                   |                   |                     |   |                      |                    |                      |
| Course and verification   | -0.169<br>(0.162)   | -0.127<br>(0.242) | -0.206<br>(0.220) | -0.259<br>(0.229)   | 0.303**<br>(0.141)  | -0.387**<br>(0.184)  | -0.302*<br>(0.169) | -0.231<br>(0.209)    |
| Course  | -0.041<br>(0.171)   | 0.443*<br>(0.251) | -0.063<br>(0.238) | -0.520**<br>(0.231) | 0.388***<br>(0.120)   | -0.432**<br>(0.184)  | -0.219<br>(0.164)  | -0.552***<br>(0.182) |
| Verification  | -0.033<br>(0.165)   | 0.203<br>(0.243)  | -0.042<br>(0.248) | -0.225<br>(0.261)   | 0.489***<br>(0.140)   | -0.510**<br>(0.203)  | -0.213<br>(0.185)  | -0.833***<br>(0.185) |
| Course and Verification (p-value)                                     | 0.299   | 0.601             | 0.349             | 0.259               | 0.032   | 0.037                | 0.075              | 0.271                |
| Course (p-value)  | 0.81  | 0.079             | 0.791             | 0.025               | 0.001   | 0.019                | 0.182              | 0.003                |
| Verification (p-value)  | 0.842   | 0.404             | 0.866             | 0.39                | 0.001   | 0.013                | 0.25               | 0                    |
| $\tau_1 + \tau_2 = 0$ (p-value)                                       | 0.793   | 0.138             | 0.869             | 0.324               | 0.026   | 0.188                | 0.484              | 0.003                |
| R <sup>2</sup>  | 0.484   | 0.523             | 0.485             | 0.453               | 0.561   | 0.563                | 0.534              | 0.509                |
| <b>Panel C: Treatment effects with covariates selected with LASSO</b> |   |                   |                   |                     |   |                      |                    |                      |
| <b>Panel C.1: Sample course Delivery Online</b>                       |   |                   |                   |                     |   |                      |                    |                      |
| Course and verification   | 0.115<br>(0.152)  | 0.050<br>(0.223)  | 0.053<br>(0.241)  | 0.157<br>(0.236)    | -0.265<br>(0.167)   | 0.642**<br>(0.286)   | -0.142<br>(0.176)  | 0.365*<br>(0.214)    |
| Course  | -0.116<br>(0.164)   | 0.189<br>(0.204)  | -0.024<br>(0.271) | -0.582**<br>(0.294) | -0.072<br>(0.161)   | 0.254<br>(0.283)     | -0.160<br>(0.194)  | 0.058<br>(0.207)     |
| Verification  | 0.162<br>(0.124)  | 0.265<br>(0.176)  | 0.169<br>(0.228)  | 0.079<br>(0.217)    | -0.264*<br>(0.147)  | 0.444*<br>(0.269)    | 0.111<br>(0.161)   | 0.310*<br>(0.185)    |
| Course and Verification (p-value)                                     | 0.453   | 0.824             | 0.828             | 0.507               | 0.114   | 0.025                | 0.42               | 0.09                 |
| Course (p-value)  | 0.48  | 0.354             | 0.929             | 0.049               | 0.654   | 0.37                 | 0.411              | 0.779                |
| Verification (p-value)  | 0.192   | 0.134             | 0.459             | 0.718               | 0.074   | 0.1                  | 0.491              | 0.095                |
| $\tau_1 = 0$ (p-value)  | 0.5776  | 0.748             | 0.9126            | 0.1476              | 0.3239  | 0.1164               | 0.6084             | 0.3796               |
| <b>C.2 Sample Course Delivery WhatsApp</b>                            |   |                   |                   |                     |   |                      |                    |                      |
| Course and verification   | -0.107<br>(0.150)   | -0.075<br>(0.233) | -0.217<br>(0.208) | -0.232<br>(0.219)   | 0.255*<br>(0.144)   | -0.414**<br>(0.194)  | -0.273<br>(0.172)  | -0.166<br>(0.213)    |
| Course  | -0.082<br>(0.161)   | 0.334<br>(0.224)  | -0.079<br>(0.235) | -0.563**<br>(0.222) | 0.404***<br>(0.117)   | -0.476***<br>(0.176) | -0.238<br>(0.158)  | -0.563***<br>(0.184) |
| Verification  | -0.030<br>(0.151)   | 0.052<br>(0.215)  | 0.034<br>(0.222)  | -0.188<br>(0.259)   | 0.443***<br>(0.137)   | -0.452**<br>(0.192)  | -0.241<br>(0.190)  | -0.738***<br>(0.181) |
| Course and Verification (p-value)                                     | 0.474   | 0.747             | 0.297             | 0.29                | 0.078   | 0.034                | 0.114              | 0.436                |
| Course (p-value)  | 0.609   | 0.137             | 0.736             | 0.012               | 0.001   | 0.007                | 0.132              | 0.002                |
| Verification (p-value)  | 0.844   | 0.809             | 0.878             | 0.467               | 0.001   | 0.019                | 0.207              | 0                    |
| $\tau_1 + \tau_2 = 0$ (p-value)                                       | 0.931   | 0.424             | 0.801             | 0.238               | 0.042   | 0.216                | 0.507              | 0.009                |
| Outcome mean  | 0   | 4.175             | 4.108             | 3.844               | 0   | 3.609                | 5.037              | 3.86                 |
| Outcome std. dev.   | 1   | 1.484             | 1.445             | 1.51                | 1   | 1.526                | 1.168              | 1.327                |
| Outcome range   | [-2.8,1.8]  | [1,6]             | [1,6]             | [1,6]               | [-1.7,3.3]  | [1,6]                | [1,6]              | [1,6]                |
| Num. LASSO covariates   | 12  | 20                | 0                 | 7                   | 3   | 1                    | 0                  | 9                    |
| Observations  | 463   | 463               | 463               | 463                 | 463   | 463                  | 463                | 463                  |
| R <sup>2</sup>  | 0.515   | 0.565             | 0.443             | 0.466               | 0.538   | 0.511                | 0.487              | 0.515                |

Notes: We report estimates from OLS regression including randomization block fixed effects. All specifications in all panels include the corresponding outcome variables at baseline as a control. Specifications in Panel A and B further include covariates in the outcome family as controls. Specifications in Panel A and B further include covariates in the outcome family as controls. Specifications in Panel C are from a 10-fold cross validation LASSO model with lambda chosen to be that of the minimum average cross-validated error. The treatment indicators, lagged dependent variable, and fixed effects are forced into the LASSO model and covariates are selected from a pool of 72 baseline variables for each specification. Robust standard errors are in parentheses.  $\tau_1$  is the vector of parameters for the treatment groups in the Online sample, and  $\tau_1 + \tau_2$  captures the effect for the WhatsApp sample as in equation S1. \* denotes  $p < 0.1$ , \*\* denotes  $p < 0.05$ , and \*\*\* denotes  $p < 0.01$ .

Table S21: Treatment effects on sharing behavior index's components

| Panel A: Treatment effects with covariates in the outcome family      |  |   |  |   |  |
|---|--|---|--|---|--|
|   | Decrease sharing behavior index of (1,-1,-1) (1) | If you know a story is false, how often do you share its falsehood with others on social media? (2) | How often do you share news you receive on WhatsApp and social media (3) | Share scenario 1 without verification † (4) | Share scenario 3 without verification †† (5) |
| <b>A.1 Sample course Delivery Online</b>                              |  |   |  |   |  |
| Course and verification   | 0.152 (0.184)                                    | 0.180 (0.212)   | 0.082 (0.148)  | 0.006 (0.185)                               | -0.382* (0.197)                              |
| Course  | 0.292 (0.232)                                    | -0.092 (0.218)  | -0.064 (0.248)   | -0.250 (0.192)                              | -0.378* (0.211)                              |
| Verification  | 0.374** (0.184)                                  | 0.098 (0.206)   | -0.156 (0.175)   | -0.239 (0.178)                              | -0.365* (0.189)                              |
| Course and Verification (p-value)                                     | 0.412  | 0.396   | 0.58   | 0.976                                       | 0.053  |
| Course (p-value)  | 0.209  | 0.672   | 0.798  | 0.194                                       | 0.075  |
| Verification (p-value)  | 0.043  | 0.636   | 0.372  | 0.18  | 0.054  |
| $\tau_1 = 0$ (p-value)  | 0.2448   | 0.8125  | 0.6967   | 0.3892                                      | 0.2067                                       |
| <b>A.2 Sample Course Delivery WhatsApp</b>                            |  |   |  |   |  |
| Course and verification   | -0.023 (0.143)                                   | 0.212 (0.200)   | 0.171 (0.140)  | 0.001 (0.146)                               | -0.031 (0.175)                               |
| Course  | 0.102 (0.144)                                    | 0.094 (0.202)   | 0.114 (0.144)  | -0.128 (0.145)                              | -0.240 (0.159)                               |
| Verification  | 0.243 (0.169)                                    | 0.198 (0.221)   | -0.120 (0.151)   | 0.021 (0.161)                               | -0.296 (0.192)                               |
| Course and Verification (p-value)                                     | 0.872  | 0.29  | 0.222  | 0.994                                       | 0.861  |
| Course (p-value)  | 0.481  | 0.643   | 0.427  | 0.376                                       | 0.133  |
| Verification (p-value)  | 0.151  | 0.371   | 0.43   | 0.897                                       | 0.124  |
| $\tau_1 + \tau_2 = 0$ (p-value)                                       | 0.573  | 0.801   | 0.504  | 0.862                                       | 0.448  |
| R <sup>2</sup>  | 0.381  | 0.444   | 0.401  | 0.428                                       | 0.456  |
| <b>Panel B: IPSW with covariates in the outcome family</b>            |  |   |  |   |  |
| <b>Panel B.1: Sample course Delivery Online</b>                       |  |   |  |   |  |
| Course and verification   | 0.142 (0.179)                                    | 0.190 (0.214)   | 0.161 (0.221)  | 0.004 (0.185)                               | -0.477** (0.215)                             |
| Course  | 0.366* (0.198)                                   | -0.091 (0.218)  | -0.202 (0.247)   | -0.201 (0.182)                              | -0.488** (0.223)                             |
| Verification  | 0.361** (0.180)                                  | 0.100 (0.213)   | -0.066 (0.211)   | -0.234 (0.175)                              | -0.508** (0.212)                             |
| Course and Verification (p-value)                                     | 0.428  | 0.374   | 0.467  | 0.982                                       | 0.028  |
| Course (p-value)  | 0.066  | 0.677   | 0.414  | 0.27  | 0.03   |
| Verification (p-value)  | 0.046  | 0.64  | 0.753  | 0.184                                       | 0.017  |
| $\tau_1 = 0$ (p-value)  | 0.2483   | 0.808   | 0.5366   | 0.5257                                      | 0.1076                                       |
| <b>B.2 Sample Course Delivery WhatsApp</b>                            |  |   |  |   |  |
| Course and verification   | -0.018 (0.143)                                   | 0.154 (0.207)   | 0.100 (0.139)  | 0.034 (0.146)                               | 0.013 (0.177)                                |
| Course  | 0.082 (0.143)                                    | 0.009 (0.204)   | 0.076 (0.144)  | -0.097 (0.143)                              | -0.230 (0.167)                               |
| Verification  | 0.278* (0.163)                                   | 0.257 (0.226)   | -0.150 (0.150)   | 0.085 (0.160)                               | -0.371* (0.200)                              |
| Course and Verification (p-value)                                     | 0.901  | 0.458   | 0.473  | 0.817                                       | 0.942  |
| Course (p-value)  | 0.565  | 0.966   | 0.598  | 0.498                                       | 0.17   |
| Verification (p-value)  | 0.089  | 0.257   | 0.321  | 0.597                                       | 0.065  |
| $\tau_1 + \tau_2 = 0$ (p-value)                                       | 0.369  | 0.666   | 0.609  | 0.776                                       | 0.201  |
| R <sup>2</sup>  | 0.437  | 0.469   | 0.411  | 0.446                                       | 0.473  |
| <b>Panel C: Treatment effects with covariates selected with LASSO</b> |  |   |  |   |  |
| <b>Panel C.1: Sample course Delivery Online</b>                       |  |   |  |   |  |
| Course and verification   | 0.118 (0.172)                                    | 0.141 (0.195)   | 0.194 (0.127)  | -0.019 (0.190)                              | -0.492** (0.198)                             |
| Course  | 0.331 (0.215)                                    | -0.068 (0.214)  | 0.032 (0.220)  | -0.235 (0.201)                              | -0.591*** (0.198)                            |
| Verification  | 0.423** (0.169)                                  | 0.099 (0.195)   | -0.044 (0.156)   | -0.279 (0.180)                              | -0.518*** (0.177)                            |
| Course and Verification (p-value)                                     | 0.493  | 0.472   | 0.128  | 0.922                                       | 0.013  |
| Course (p-value)  | 0.126  | 0.75  | 0.884  | 0.244                                       | 0.003  |
| Verification (p-value)  | 0.013  | 0.612   | 0.777  | 0.122                                       | 0.004  |
| $\tau_1 = 0$ (p-value)  | 0.1155   | 0.8852  | 0.6476   | 0.3598                                      | 0.0208                                       |
| <b>C.2 Sample Course Delivery WhatsApp</b>                            |  |   |  |   |  |
| Course and verification   | -0.022 (0.138)                                   | 0.217 (0.204)   | 0.133 (0.138)  | 0.001 (0.146)                               | -0.005 (0.164)                               |
| Course  | 0.131 (0.146)                                    | 0.074 (0.204)   | 0.037 (0.138)  | -0.087 (0.150)                              | -0.268* (0.151)                              |
| Verification  | 0.319* (0.170)                                   | 0.221 (0.224)   | -0.289* (0.154)  | 0.026 (0.164)                               | -0.272 (0.185)                               |
| Course and Verification (p-value)                                     | 0.874  | 0.289   | 0.335  | 0.997                                       | 0.978  |
| Course (p-value)  | 0.371  | 0.716   | 0.787  | 0.565                                       | 0.076  |
| Verification (p-value)  | 0.061  | 0.324   | 0.063  | 0.872                                       | 0.143  |
| $\tau_1 + \tau_2 = 0$ (p-value)                                       | 0.312  | 0.749   | 0.168  | 0.946                                       | 0.362  |
| Outcome mean  | 0  | 2.775   | 0  | 1.756                                       | 1.955  |
| Outcome std. dev.   | 1  | 1.307   | 0.999  | 0.982                                       | 1.168  |
| Outcome range   | [-3.5,1]   | [1,6]   | [-7,1.6]   | [1,5]                                       | [1,5]  |
| Num. LASSO covariates   | 6  | 1   | 6  | 0   | 11   |
| Observations  | 463  | 463   | 463  | 463   | 463  |
| R <sup>2</sup>  | 0.441  | 0.454   | 0.492  | 0.406                                       | 0.528  |

Notes: We report estimates from OLS regression including randomized block fixed effects. All specifications in all panels include the corresponding outcome variables at baseline as a control. Specifications in Panel A and B further include covariates in the outcome family as controls. Specifications in Panel A and B further include covariates in the outcome family as controls. Specifications in Panel C are from a 10-fold cross validation LASSO model with lambda chosen to be that of the minimum average cross-validated error. The treatment indicators, lagged dependent variable, and fixed effects are forced into the LASSO model and covariates are selected from a pool of 72 baseline variables for each specification. Robust standard errors are in parentheses.  $\tau_1$  is the vector of parameters for the treatment groups in the Online sample, and  $\tau_1 + \tau_2$  captures the effect for the WhatsApp sample as in equation S1. †: imagine you received an that came to you on WhatsApp with a screenshot of the Twitter account of a well-known person saying something very controversial. ††: imagine you received an audio that came to you by WhatsApp reporting evidence of corruption of a politician that you already suspected and you did not like. \* denotes  $p < 0.1$ , \*\* denotes  $p < 0.05$ , and \*\*\* denotes  $p < 0.01$ .

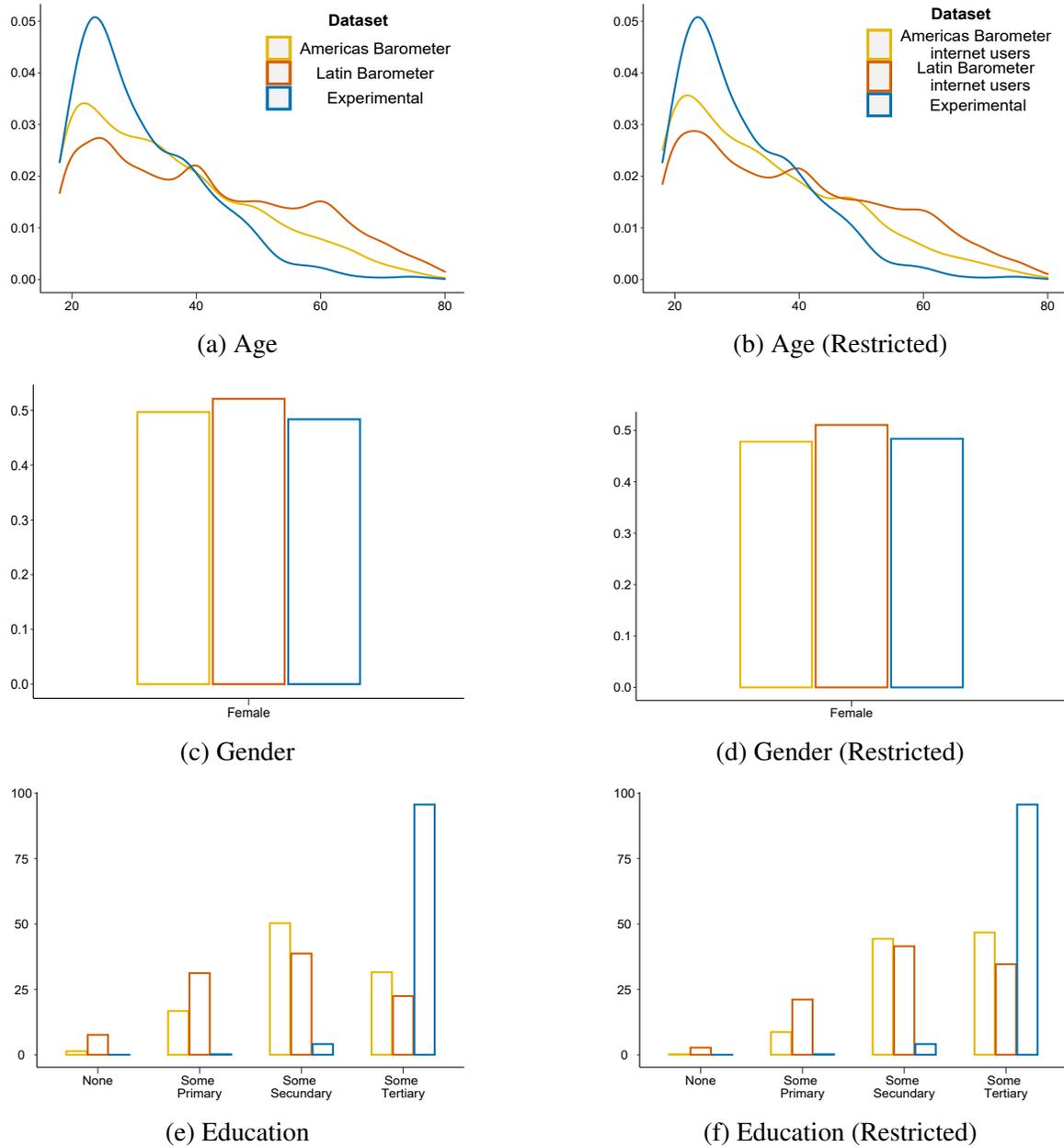
Table S22: Treatment effects on verifying behavior index's components

| <b>Panel A: Treatment effects with covariates in the outcome family</b> |  |   |
|---|--|---|
|   | Increase verifying behavior index of (1) (1) | How often do you verify news that you doubt may be false before sharing it? (2) |
| <b>A.1 Sample course Delivery Online</b>                                |  |   |
| Course and verification   | 0.135<br>(0.175)                             | 0.126<br>(0.163)  |
| Course  | 0.190<br>(0.197)                             | 0.177<br>(0.183)  |
| Verification  | -0.012<br>(0.179)                            | -0.011<br>(0.166)   |
| Course and Verification (p-value)                                       | 0.44   | 0.44  |
| Course (p-value)  | 0.336  | 0.336   |
| Verification (p-value)  | 0.945  | 0.945   |
| $\tau_1 = 0$ (p-value)  | 0.7227                                       | 0.7227  |
| <b>A.2 Sample Course Delivery WhatsApp</b>                              |  |   |
| Course and verification   | 0.038<br>(0.144)                             | 0.035<br>(0.134)  |
| Course  | 0.049<br>(0.152)                             | 0.045<br>(0.141)  |
| Verification  | 0.208<br>(0.131)                             | 0.194<br>(0.122)  |
| Course and Verification (p-value)                                       | 0.793  | 0.793   |
| Course (p-value)  | 0.749  | 0.749   |
| Verification (p-value)  | 0.113  | 0.113   |
| $\tau_1 + \tau_2 = 0$ (p-value)   | 0.745  | 0.745   |
| R <sup>2</sup>  | 0.437  | 0.437   |
| <b>Panel B: IPSW with covariates in the outcome family</b>              |  |   |
| <b>Panel B.1: Sample course Delivery Online</b>                         |  |   |
| Course and verification   | 0.151<br>(0.174)                             | 0.140<br>(0.162)  |
| Course  | 0.259<br>(0.189)                             | 0.241<br>(0.176)  |
| Verification  | -0.007<br>(0.181)                            | -0.007<br>(0.168)   |
| Course and Verification (p-value)                                       | 0.386  | 0.386   |
| Course (p-value)  | 0.172  | 0.172   |
| Verification (p-value)  | 0.968  | 0.968   |
| $\tau_1 = 0$ (p-value)  | 0.5696                                       | 0.5696  |
| <b>B.2 Sample Course Delivery WhatsApp</b>                              |  |   |
| Course and verification   | 0.025<br>(0.147)                             | 0.024<br>(0.137)  |
| Course  | 0.038<br>(0.158)                             | 0.035<br>(0.147)  |
| Verification  | 0.189<br>(0.144)                             | 0.176<br>(0.134)  |
| Course and Verification (p-value)                                       | 0.863  | 0.863   |
| Course (p-value)  | 0.811  | 0.811   |
| Verification (p-value)  | 0.191  | 0.191   |
| $\tau_1 + \tau_2 = 0$ (p-value)   | 0.728  | 0.728   |
| R <sup>2</sup>  | 0.499  | 0.499   |
| <b>Panel C: Treatment effects with covariates selected with LASSO</b>   |  |   |
| <b>Panel C.1: Sample course Delivery Online</b>                         |  |   |
| Course and verification   | 0.064<br>(0.157)                             | 0.060<br>(0.146)  |
| Course  | 0.180<br>(0.181)                             | 0.168<br>(0.168)  |
| Verification  | -0.069<br>(0.164)                            | -0.064<br>(0.153)   |
| Course and Verification (p-value)                                       | 0.684  | 0.684   |
| Course (p-value)  | 0.32   | 0.32  |
| Verification (p-value)  | 0.675  | 0.675   |
| $\tau_1 = 0$ (p-value)  | 0.6903                                       | 0.6903  |
| <b>C.2 Sample Course Delivery WhatsApp</b>                              |  |   |
| Course and verification   | 0.045<br>(0.139)                             | 0.041<br>(0.129)  |
| Course  | 0.100<br>(0.142)                             | 0.093<br>(0.132)  |
| Verification  | 0.194<br>(0.128)                             | 0.180<br>(0.119)  |
| Course and Verification (p-value)                                       | 0.749  | 0.749   |
| Course (p-value)  | 0.483  | 0.483   |
| Verification (p-value)  | 0.133  | 0.133   |
| $\tau_1 + \tau_2 = 0$ (p-value)   | 0.754  | 0.754   |
| Outcome mean  | 0  | 3.808   |
| Outcome std. dev.   | 1  | 0.93  |
| Outcome range   | [-3,1.3]                                     | [1,5]   |
| Num. LASSO covariates   | 7  | 7   |
| Observations  | 463  | 463   |
| R <sup>2</sup>  | 0.506  | 0.506   |

Notes: We report estimates from OLS regression including randomization block fixed effects. All specifications in Panel A and B further include covariates in the outcome family as controls. Specifications in Panel A and B further include covariates in the outcome family as controls. Specifications in Panel C are from a 10-fold cross validation LASSO model with lambda chosen to be that of the minimum average cross-validated error. The treatment indicators, lagged dependent variable, and fixed effects are forced into the LASSO model and covariates are selected from a pool of 72 baseline variables for each specification. Robust standard errors are in parentheses.  $\tau_1$  is the vector of parameters for the treatment groups in the Online sample, and  $\tau_1 + \tau_2$  captures the effect for the WhatsApp sample as in equation S1. \* denotes  $p < 0.1$ , \*\* denotes  $p < 0.05$ , and \*\*\* denotes  $p < 0.01$ .

# Sample Comparison

Figure S6: Comparison of demographics in the restricted and unrestricted Americas Barometer sample and the Latin Barometer sample to internet users, and experimental sample respondents



Notes: Additional summary statistic comparisons are in Table S23.

Table S23: Summary statistics of comparable demographics in the restricted and unrestricted Americas Barometer sample and the Latin Barometer sample to internet users, and the experimental sample

|           | Americas Barometer sample | Latin Barometer sample | Americas Barometer internet users sample | Latin Barometer internet users sample | Experimental sample |
|-----------|---------------------------|------------------------|--|---------------------------------------|---------------------|
| Age       | 38.575                    | 40.962                 | 38.165                                   | 39.780                                | 31.114              |
|           | 15.002                    | 16.436                 | 15.023                                   | 15.993                                | 10.203              |
|           | 3002                      | 20077                  | 1393                                     | 10163                                 | 463                 |
| Gender    | 0.497                     | 0.521                  | 0.478                                    | 0.511                                 | 0.484               |
|           | 0.500                     | 0.500                  | 0.500                                    | 0.500                                 | 0.500               |
|           | 3002                      | 20077                  | 1393                                     | 10163                                 | 463                 |
| Education | 2.121                     | 1.759                  | 2.376                                    | 2.080                                 | 2.955               |
|           | 0.723                     | 0.886                  | 0.650                                    | 0.813                                 | 0.218               |
|           | 3002                      | 20077                  | 1393                                     | 10163                                 | 463                 |

*Notes:* For every variable, each row shows the mean, standard deviation, and number of observations. The Americas Barometer sample is for the year 2021 and the Latin Barometer sample for the year 2020. The Americas Barometer restricted to internet users and the Latin Barometer restricted to internet users are the subset of respondents that have connection or a contract of internet at home.

Table S24: Treatment effects on indexes by course delivered online and via WhatsApp with post-stratifications weights to mimic the Americas Barometer sample restricted to internet users

Panel A: Treatment effects with covariates in the outcome family

|  | Mis-information index (1) | Decrease likelihood of false of traditional sources index (2) | Increase likelihood of false of social media sources index (3) | Trust traditional sources index (4) | Disrust social media sources index (5) | Attention to mis-information index (6) | Increase knowledge to identify information index (7) | Increase knowledge to verify information index (8) | Increase consumption behavior of traditional sources index (9) | Decrease consumption behavior of social media sources index (10) | Decrease sharing behavior index (11) | Increase verifying behavior index (12) |
|--|---------------------------|---|--|-------------------------------------|--|--|--|--|--|--|--------------------------------------|--|
| <b>A.1 Sample course Delivery Online</b>   |                           |   |  |                                     |  |  |  |  |  |  |                                      |  |
| Course and verification                    | -0.018 (0.184)            | 0.328* (0.184)  | -0.112 (0.156)   | -0.009 (0.181)                      | -0.049 (0.187)                         | 0.224 (0.174)                          | 0.213 (0.176)  | 0.599*** (0.134)                                   | 0.056 (0.155)  | -0.211 (0.165)   | 0.133 (0.195)                        | 0.166 (0.176)                          |
| Course                                     | 0.116 (0.215)             | -0.069 (0.195)  | 0.188 (0.176)  | -0.203 (0.180)                      | 0.054 (0.185)                          | 0.097 (0.174)                          | 0.296 (0.193)  | 0.582*** (0.160)                                   | -0.178 (0.178)   | -0.115 (0.155)   | 0.281 (0.236)                        | 0.216 (0.197)                          |
| Verification                               | -0.070 (0.164)            | 0.029 (0.159)   | -0.176 (0.168)   | -0.119 (0.165)                      | -0.059 (0.191)                         | 0.265* (0.159)                         | -0.005 (0.164)                                       | -0.008 (0.115)                                     | 0.136 (0.134)  | -0.247 (0.152)   | 0.376** (0.189)                      | 0.011 (0.179)                          |
| Course and Verification (p-value)          | 0.922                     | 0.076   | 0.476  | 0.959                               | 0.795                                  | 0.199                                  | 0.229  | 0  | 0.717  | 0.202  | 0.496                                | 0.348                                  |
| Course (p-value)                           | 0.591                     | 0.723   | 0.285  | 0.259                               | 0.77                                   | 0.577                                  | 0.127  | 0  | 0.318  | 0.46   | 0.234                                | 0.274                                  |
| Verification (p-value)                     | 0.672                     | 0.858   | 0.295  | 0.471                               | 0.756                                  | 0.096                                  | 0.974  | 0.946  | 0.308  | 0.104  | 0.048                                | 0.95                                   |
| $\tau_1 = 0$ (p-value)                     | 0.8953                    | 0.2668  | 0.4179   | 0.7427                              | 0.9591                                 | 0.4424                                 | 0.385  | 0  | 0.5675   | 0.4878   | 0.2454                               | 0.6621                                 |
| <b>A.2 Sample Course Delivery WhatsApp</b> |                           |   |  |                                     |  |  |  |  |  |  |                                      |  |
| Course and verification                    | -0.017 (0.146)            | 0.085 (0.144)   | 0.347** (0.163)  | 0.109 (0.141)                       | 0.099 (0.145)                          | 0.309** (0.149)                        | 0.070 (0.148)  | 0.173 (0.133)                                      | -0.197 (0.159)   | 0.278* (0.144)   | -0.016 (0.142)                       | 0.077 (0.154)                          |
| Course                                     | -0.247 (0.160)            | -0.147 (0.141)  | 0.169 (0.166)  | 0.102 (0.142)                       | 0.268* (0.154)                         | 0.101 (0.149)                          | 0.058 (0.143)  | 0.150 (0.123)                                      | -0.060 (0.174)   | 0.359*** (0.127)   | 0.079 (0.144)                        | -0.013 (0.156)                         |
| Verification                               | -0.180 (0.163)            | 0.066 (0.149)   | 0.233 (0.141)  | 0.029 (0.152)                       | 0.185 (0.140)                          | 0.077 (0.136)                          | 0.026 (0.167)  | 0.072 (0.133)                                      | -0.052 (0.158)   | 0.467*** (0.140)   | 0.219 (0.168)                        | 0.191 (0.131)                          |
| Course and Verification (p-value)          | 0.908                     | 0.553   | 0.035  | 0.439                               | 0.496                                  | 0.03                                   | 0.637  | 0.195  | 0.217  | 0.054  | 0.911                                | 0.616                                  |
| Course (p-value)                           | 0.123                     | 0.301   | 0.31   | 0.472                               | 0.082                                  | 0.496                                  | 0.688  | 0.226  | 0.731  | 0.005  | 0.582                                | 0.934                                  |
| Verification (p-value)                     | 0.272                     | 0.66  | 0.1  | 0.847                               | 0.188                                  | 0.573                                  | 0.877  | 0.588  | 0.741  | 0.001  | 0.194                                | 0.144                                  |
| $\tau_1 + \tau_2 = 0$ (p-value)            | 0.516                     | 0.608   | 0.294  | 0.911                               | 0.513                                  | 0.323                                  | 0.981  | 0.672  | 0.74   | 0.049  | 0.662                                | 0.735                                  |
| R <sup>2</sup>                             | 0.430                     | 0.766   | 0.870  | 0.700                               | 0.804                                  | 0.883                                  | 0.507  | 0.822  | 0.483  | 0.582  | 0.573                                | 0.704                                  |

Panel B: IPSW with covariates in the outcome family

Panel B.1: Sample course Delivery Online

|                                   |                |                |                |                |                |                |               |                  |                |                |                 |               |
|-----------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|---------------|------------------|----------------|----------------|-----------------|---------------|
| Course and verification           | -0.010 (0.184) | 0.310* (0.181) | -0.106 (0.157) | -0.001 (0.181) | -0.038 (0.183) | 0.257 (0.177)  | 0.198 (0.174) | 0.619*** (0.139) | 0.057 (0.160)  | -0.202 (0.169) | 0.145 (0.181)   | 0.185 (0.176) |
| Course                            | 0.140 (0.222)  | -0.027 (0.197) | 0.194 (0.181)  | -0.194 (0.177) | 0.080 (0.178)  | 0.136 (0.170)  | 0.277 (0.192) | 0.659*** (0.162) | -0.237 (0.185) | -0.083 (0.157) | 0.326 (0.200)   | 0.295 (0.190) |
| Verification                      | -0.107 (0.169) | 0.008 (0.166)  | -0.133 (0.172) | -0.145 (0.191) | -0.022 (0.191) | 0.310* (0.163) | 0.023 (0.169) | 0.027 (0.124)    | 0.136 (0.141)  | -0.255 (0.157) | 0.357** (0.181) | 0.019 (0.182) |
| Course and Verification (p-value) | 0.955          | 0.089          | 0.5            | 0.994          | 0.834          | 0.149          | 0.256         | 0                | 0.724          | 0.234          | 0.423           | 0.292         |
| Course (p-value)                  | 0.529          | 0.89           | 0.286          | 0.272          | 0.652          | 0.423          | 0.149         | 0                | 0.201          | 0.599          | 0.105           | 0.121         |
| Verification (p-value)            | 0.527          | 0.96           | 0.447          | 0.4            | 0.907          | 0.059          | 0.89          | 0.828            | 0.334          | 0.105          | 0.05            | 0.918         |
| $\tau_1 = 0$ (p-value)            | 0.8128         | 0.3594         | 0.497          | 0.72           | 0.9588         | 0.3975         | 0.5153        | 1e-04            | 0.4392         | 0.5717         | 0.3046          | 0.4874        |

B.2 Sample Course Delivery WhatsApp

|                                   |                 |                |                 |               |                 |                 |                |               |                |                  |                |                |
|-----------------------------------|-----------------|----------------|-----------------|---------------|-----------------|-----------------|----------------|---------------|----------------|------------------|----------------|----------------|
| Course and verification           | -0.082 (0.164)  | 0.105 (0.148)  | 0.328** (0.163) | 0.109 (0.142) | 0.110 (0.146)   | 0.336** (0.141) | 0.064 (0.150)  | 0.128 (0.132) | -0.175 (0.162) | 0.313** (0.140)  | -0.017 (0.141) | 0.071 (0.155)  |
| Course                            | -0.315* (0.170) | -0.151 (0.151) | 0.174 (0.158)   | 0.104 (0.143) | 0.298** (0.150) | 0.138 (0.142)   | 0.055 (0.146)  | 0.164 (0.122) | -0.022 (0.173) | 0.389*** (0.141) | 0.072 (0.141)  | -0.004 (0.158) |
| Verification                      | -0.163 (0.174)  | 0.129 (0.146)  | 0.236* (0.140)  | 0.064 (0.149) | 0.170 (0.138)   | 0.105 (0.136)   | -0.015 (0.160) | 0.046 (0.128) | -0.018 (0.168) | 0.491*** (0.141) | 0.253 (0.161)  | 0.181 (0.142)  |
| Course and Verification (p-value) | 0.617           | 0.478          | 0.045           | 0.441         | 0.452           | 0.018           | 0.67           | 0.335         | 0.282          | 0.026            | 0.906          | 0.647          |
| Course (p-value)                  | 0.065           | 0.317          | 0.271           | 0.467         | 0.049           | 0.331           | 0.705          | 0.179         | 0.899          | 0.002            | 0.609          | 0.981          |
| Verification (p-value)            | 0.35            | 0.377          | 0.093           | 0.668         | 0.217           | 0.442           | 0.924          | 0.717         | 0.913          | 0.001            | 0.118          | 0.203          |
| $\tau_1 + \tau_2 = 0$ (p-value)   | 0.408           | 0.374          | 0.304           | 0.915         | 0.399           | 0.202           | 0.961          | 0.696         | 0.742          | 0.024            | 0.444          | 0.723          |
| R <sup>2</sup>                    | 0.430           | 0.781          | 0.878           | 0.725         | 0.819           | 0.895           | 0.537          | 0.830         | 0.503          | 0.613            | 0.624          | 0.725          |

Panel C: Treatment effects with covariates selected with LASSO

Panel C.1: Sample course Delivery Online

|                                   |                |                  |                |                |                |                |                 |                  |                |                  |                 |                |
|-----------------------------------|----------------|------------------|----------------|----------------|----------------|----------------|-----------------|------------------|----------------|------------------|-----------------|----------------|
| Course and verification           | -0.046 (0.186) | 0.444*** (0.172) | -0.191 (0.160) | 0.060 (0.185)  | -0.002 (0.186) | 0.203 (0.170)  | 0.225 (0.166)   | 0.554*** (0.137) | 0.124 (0.151)  | -0.250 (0.165)   | 0.110 (0.179)   | 0.078 (0.161)  |
| Course                            | 0.109 (0.209)  | -0.024 (0.192)   | 0.236 (0.185)  | -0.183 (0.178) | 0.081 (0.187)  | 0.135 (0.173)  | 0.421** (0.182) | 0.640*** (0.138) | -0.122 (0.161) | -0.105 (0.158)   | 0.314 (0.218)   | 0.189 (0.181)  |
| Verification                      | -0.072 (0.165) | -0.008 (0.151)   | -0.192 (0.162) | -0.105 (0.159) | -0.117 (0.188) | 0.262* (0.152) | 0.071 (0.155)   | -0.011 (0.111)   | 0.148 (0.124)  | -0.265** (0.148) | 0.418** (0.170) | -0.070 (0.168) |
| Course and Verification (p-value) | 0.806          | 0.01             | 0.234          | 0.746          | 0.993          | 0.232          | 0.176           | 0                | 0.411          | 0.13             | 0.539           | 0.63           |
| Course (p-value)                  | 0.602          | 0.901            | 0.203          | 0.303          | 0.664          | 0.436          | 0.021           | 0                | 0.45           | 0.506            | 0.15            | 0.297          |
| Verification (p-value)            | 0.665          | 0.958            | 0.236          | 0.508          | 0.533          | 0.087          | 0.646           | 0.924            | 0.233          | 0.074            | 0.014           | 0.679          |
| $\tau_1 = 0$ (p-value)            | 0.8865         | 0.0506           | 0.192          | 0.6566         | 0.8303         | 0.4979         | 0.1701          | 0                | 0.5857         | 0.3626           | 0.1239          | 0.6595         |

C.2 Sample Course Delivery WhatsApp

|                                   |                 |                |                 |               |                 |                |               |               |                |                  |                |               |
|-----------------------------------|-----------------|----------------|-----------------|---------------|-----------------|----------------|---------------|---------------|----------------|------------------|----------------|---------------|
| Course and verification           | -0.048 (0.146)  | 0.071 (0.132)  | 0.320** (0.148) | 0.161 (0.141) | 0.157 (0.145)   | 0.294* (0.161) | 0.092 (0.139) | 0.195 (0.122) | -0.108 (0.155) | 0.267* (0.144)   | -0.019 (0.138) | 0.088 (0.147) |
| Course                            | -0.272* (0.159) | -0.147 (0.139) | 0.137 (0.161)   | 0.191 (0.153) | 0.310** (0.148) | -0.011 (0.197) | 0.117 (0.126) | 0.165 (0.118) | -0.012 (0.182) | 0.373*** (0.139) | 0.106 (0.144)  | 0.033 (0.151) |
| Verification                      | -0.187 (0.166)  | 0.051 (0.138)  | 0.241* (0.131)  | 0.046 (0.150) | 0.226 (0.142)   | 0.051 (0.145)  | 0.082 (0.153) | 0.028 (0.126) | -0.017 (0.154) | 0.438*** (0.140) | 0.304* (0.170) | 0.175 (0.128) |
| Course and Verification (p-value) | 0.74            | 0.594          | 0.031           | 0.254         | 0.281           | 0.08           | 0.51          | 0.111         | 0.484          | 0.064            | 0.889          | 0.549         |
| Course (p-value)                  | 0.088           | 0.292          | 0.395           | 0.214         | 0.036           | 0.957          | 0.352         | 0.163         | 0.949          | 0.008            | 0.463          | 0.827         |
| Verification (p-value)            | 0.259           | 0.712          | 0.067           | 0.761         | 0.112           | 0.727          | 0.59          | 0.826         | 0.911          | 0.002            | 0.074          | 0.172         |
| $\tau_1 + \tau_2 = 0$ (p-value)   | 0.473           | 0.611          | 0.321           | 0.661         | 0.38            | 0.274          | 0.908         | 0.469         | 0.927          | 0.051            | 0.357          | 0.806         |
| Outcome mean                      | 0               | 0              | 0               | 0             | 0               | 0              | 0             | 0             | 0              | 0                | 0              | 0             |
| Outcome std. dev.                 | 1               | 1              | 1               | 1             | 1               | 1              | 1             | 1             | 1              | 1                | 1              | 1             |
| Outcome range                     | [-3.2,0.6]      | [-4.1,3.1]     | [-3.8,2.5]      | [-2.6,2.2]    | [-3.4,1.7]      | [-3.6,1.4]     | [-3.3,2.5]    | [-3.3,2.1]    | [-2.8,1.8]     | [-1.7,3.3]       | [-3.5,1]       | [-3,1.3]      |
| Num. LASSO covariates             | 0               | 9              | 8               | 2             | 1               | 8              | 8             | 7             | 12             | 3                | 6              | 7             |
| Observations                      | 463             | 463            | 463             | 463           | 463             | 463            | 463           | 463           | 463            | 463              | 463            | 463           |
| R <sup>2</sup>                    | 0.419           | 0.795          | 0.875           | 0.706         | 0.802           | 0.872          | 0.584         | 0.846         | 0.534          | 0.587            | 0.615          | 0.738         |

Notes: We report estimates from OLS regression including randomization block fixed effects. All specifications in all panels include the corresponding outcome variables at baseline as a control. Specifications in Panel A and B further include covariates in the outcome family as controls. Specifications in Panel A and B further include covariates in the outcome family as controls. Specifications in Panel C are from a 10-fold cross validation LASSO model with lambda chosen to be that of the minimum average cross-validated error. The treatment indicators, lagged dependent variable, and fixed effects are forced into the LASSO model and covariates are selected from a pool of 72 baseline variables for each specification. Robust standard errors are in parentheses.  $\tau_1$  is the vector of parameters for the treatment groups in the Online sample, and  $\tau_1 + \tau_2$  captures the effect for the WhatsApp sample as in equation S1. \* denotes  $p < 0.1$ , \*\* denotes  $p < 0.05$ , and \*\*\* denotes  $p < 0.01$ .

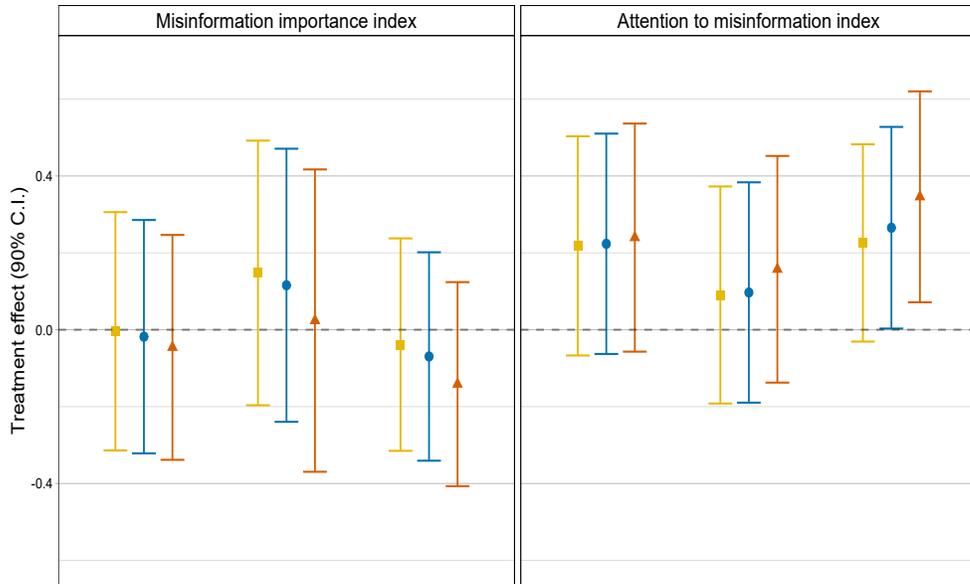
Table S25: Treatment effects on indexes by course delivered online and via WhatsApp with post-stratifications weights to mimic the Latin Barometer sample restricted to internet users

| Panel A: Treatment effects with covariates in the outcome family      |                           |   |  |                                     |  |  |  |  |  |  |                                      |  |
|---|---------------------------|---|--|-------------------------------------|--|--|--|--|--|--|--------------------------------------|--|
|   | Mis-information index (1) | Decrease likelihood of false of traditional sources index (2) | Increase likelihood of false of social media sources index (3) | Trust traditional sources index (4) | Disrust social media sources index (5) | Attention to mis-information index (6) | Increase knowledge to identify information index (7) | Increase knowledge to verify information index (8) | Increase consumption behavior of traditional sources index (9) | Decrease consumption behavior of social media sources index (10) | Decrease sharing behavior index (11) | Increase verifying behavior index (12) |
| <b>A.1 Sample course Delivery Online</b>                              |                           |   |  |                                     |  |  |  |  |  |  |                                      |  |
| Course and verification   | -0.046 (0.177)            | 0.412** (0.202)   | -0.089 (0.170)   | 0.039 (0.195)                       | -0.051 (0.196)                         | 0.240 (0.180)                          | 0.255 (0.191)  | 0.560*** (0.141)                                   | 0.063 (0.161)  | -0.182 (0.167)   | 0.074 (0.231)                        | 0.211 (0.189)                          |
| Course  | 0.024 (0.238)             | -0.049 (0.199)  | 0.282 (0.196)  | -0.235 (0.189)                      | 0.032 (0.188)                          | 0.157 (0.179)                          | 0.421** (0.198)                                      | 0.606*** (0.163)                                   | -0.253 (0.181)   | -0.184 (0.152)   | 0.228 (0.247)                        | 0.268 (0.199)                          |
| Verification  | -0.142 (0.161)            | 0.126 (0.178)   | -0.141 (0.183)   | -0.106 (0.168)                      | -0.013 (0.203)                         | 0.346** (0.166)                        | 0.076 (0.178)  | -0.033 (0.117)                                     | 0.134 (0.145)  | -0.237 (0.162)   | 0.362* (0.210)                       | 0.049 (0.190)                          |
| Course and Verification (p-value)                                     | 0.796                     | 0.042   | 0.602  | 0.841                               | 0.794                                  | 0.184                                  | 0.183  | 0  | 0.695  | 0.278  | 0.748                                | 0.266                                  |
| Course (p-value)  | 0.921                     | 0.807   | 0.152  | 0.215                               | 0.865                                  | 0.38                                   | 0.035  | 0  | 0.164  | 0.229  | 0.356                                | 0.179                                  |
| Verification (p-value)  | 0.38                      | 0.479   | 0.441  | 0.528                               | 0.951                                  | 0.038                                  | 0.669  | 0.777  | 0.357  | 0.144  | 0.086                                | 0.798                                  |
| $\tau_1 = 0$ (p-value)  | 0.875                     | 0.1269  | 0.3108   | 0.6021                              | 0.9875                                 | 0.259                                  | 0.2147   | 0  | 0.3689   | 0.5157   | 0.2701                               | 0.5174                                 |
| <b>A.2 Sample Course Delivery WhatsApp</b>                            |                           |   |  |                                     |  |  |  |  |  |  |                                      |  |
| Course and verification   | -0.004 (0.147)            | 0.107 (0.144)   | 0.321* (0.182)   | 0.137 (0.145)                       | 0.060 (0.155)                          | 0.333** (0.148)                        | 0.065 (0.160)  | 0.199 (0.137)                                      | -0.189 (0.159)   | 0.288** (0.144)  | 0.002 (0.143)                        | 0.139 (0.159)                          |
| Course  | -0.205 (0.156)            | -0.131 (0.135)  | 0.169 (0.175)  | 0.119 (0.140)                       | 0.226 (0.157)                          | 0.143 (0.154)                          | 0.020 (0.144)  | 0.087 (0.129)                                      | -0.103 (0.175)   | 0.409*** (0.125)   | 0.046 (0.147)                        | -0.031 (0.157)                         |
| Verification  | -0.174 (0.156)            | 0.065 (0.157)   | 0.173 (0.153)  | 0.059 (0.157)                       | 0.117 (0.152)                          | 0.042 (0.139)                          | 0.042 (0.176)  | 0.081 (0.135)                                      | -0.032 (0.163)   | 0.489*** (0.144)   | 0.170 (0.168)                        | 0.186 (0.125)                          |
| Course and Verification (p-value)                                     | 0.976                     | 0.456   | 0.078  | 0.345                               | 0.696                                  | 0.025                                  | 0.684  | 0.147  | 0.234  | 0.046  | 0.99                                 | 0.384                                  |
| Course (p-value)  | 0.189                     | 0.333   | 0.335  | 0.397                               | 0.151                                  | 0.356                                  | 0.888  | 0.5  | 0.574  | 0.001  | 0.754                                | 0.842                                  |
| Verification (p-value)  | 0.263                     | 0.678   | 0.258  | 0.709                               | 0.441                                  | 0.76                                   | 0.81   | 0.551  | 0.846  | 0.001  | 0.313                                | 0.139                                  |
| $\tau_1 + \tau_2 = 0$ (p-value)                                       | 0.592                     | 0.608   | 0.408  | 0.868                               | 0.662                                  | 0.241                                  | 0.987  | 0.641  | 0.844  | 0.023  | 0.83                                 | 0.63                                   |
| R <sup>2</sup>  | 0.495                     | 0.856   | 0.926  | 0.797                               | 0.883                                  | 0.936                                  | 0.571  | 0.890  | 0.541  | 0.642  | 0.690                                | 0.812                                  |
| <b>Panel B: IPSW with covariates in the outcome family</b>            |                           |   |  |                                     |  |  |  |  |  |  |                                      |  |
| <b>Panel B.1: Sample course Delivery Online</b>                       |                           |   |  |                                     |  |  |  |  |  |  |                                      |  |
| Course and verification   | 0.002 (0.186)             | 0.275 (0.179)   | -0.115 (0.155)   | -0.026 (0.178)                      | -0.038 (0.182)                         | 0.247 (0.175)                          | 0.186 (0.172)  | 0.624*** (0.138)                                   | 0.059 (0.160)  | -0.218 (0.170)   | 0.142 (0.179)                        | 0.151 (0.174)                          |
| Course  | 0.174 (0.211)             | -0.036 (0.197)  | 0.175 (0.175)  | -0.185 (0.175)                      | 0.093 (0.181)                          | 0.118 (0.168)                          | 0.228 (0.190)  | 0.643*** (0.160)                                   | -0.199 (0.182)   | -0.055 (0.158)   | 0.366* (0.198)                       | 0.259 (0.189)                          |
| Verification  | -0.076 (0.170)            | -0.029 (0.161)  | -0.149 (0.170)   | -0.148 (0.171)                      | -0.048 (0.189)                         | 0.271* (0.161)                         | -0.008 (0.165)                                       | 0.028 (0.124)                                      | 0.146 (0.137)  | -0.264* (0.155)  | 0.361** (0.180)                      | -0.007 (0.181)                         |
| Course and Verification (p-value)                                     | 0.99                      | 0.124   | 0.457  | 0.884                               | 0.836                                  | 0.16                                   | 0.28   | 0  | 0.714  | 0.2  | 0.428                                | 0.386                                  |
| Course (p-value)  | 0.41                      | 0.856   | 0.317  | 0.291                               | 0.607                                  | 0.483                                  | 0.23   | 0  | 0.276  | 0.726  | 0.066                                | 0.172                                  |
| Verification (p-value)  | 0.656                     | 0.857   | 0.381  | 0.388                               | 0.798                                  | 0.093                                  | 0.963  | 0.819  | 0.289  | 0.09   | 0.046                                | 0.968                                  |
| $\tau_1 = 0$ (p-value)  | 0.7937                    | 0.4146  | 0.475  | 0.7676                              | 0.9264                                 | 0.4635                                 | 0.5833   | 1e-04  | 0.52   | 0.5052   | 0.2483                               | 0.5696                                 |
| <b>B.2 Sample Course Delivery WhatsApp</b>                            |                           |   |  |                                     |  |  |  |  |  |  |                                      |  |
| Course and verification   | -0.084 (0.162)            | 0.096 (0.150)   | 0.332** (0.143)  | 0.096 (0.140)                       | 0.112 (0.140)                          | 0.322** (0.131)                        | 0.068 (0.147)  | 0.109 (0.128)                                      | -0.169 (0.162)   | 0.303** (0.141)  | -0.018 (0.143)                       | 0.025 (0.147)                          |
| Course  | -0.343** (0.174)          | -0.185 (0.155)  | 0.245 (0.148)  | 0.063 (0.143)                       | 0.358** (0.149)                        | 0.178 (0.133)                          | 0.065 (0.147)  | 0.221* (0.120)                                     | -0.041 (0.171)   | 0.388*** (0.140)   | 0.082 (0.143)                        | 0.038 (0.158)                          |
| Verification  | -0.163 (0.176)            | 0.117 (0.146)   | 0.275** (0.132)  | 0.042 (0.149)                       | 0.199 (0.136)                          | 0.133 (0.131)                          | -0.015 (0.158)                                       | 0.064 (0.128)                                      | -0.033 (0.165)   | 0.489*** (0.140)   | 0.278* (0.163)                       | 0.189 (0.144)                          |
| Course and Verification (p-value)                                     | 0.603                     | 0.524   | 0.021  | 0.492                               | 0.423                                  | 0.014                                  | 0.644  | 0.398  | 0.299  | 0.032  | 0.901                                | 0.863                                  |
| Course (p-value)  | 0.05                      | 0.233   | 0.1  | 0.658                               | 0.017                                  | 0.183                                  | 0.657  | 0.066  | 0.81   | 0.001  | 0.565                                | 0.811                                  |
| Verification (p-value)  | 0.355                     | 0.424   | 0.039  | 0.777                               | 0.145                                  | 0.313                                  | 0.924  | 0.618  | 0.842  | 0.001  | 0.089                                | 0.191                                  |
| $\tau_1 + \tau_2 = 0$ (p-value)                                       | 0.339                     | 0.307   | 0.231  | 0.952                               | 0.221                                  | 0.234                                  | 0.949  | 0.524  | 0.793  | 0.026  | 0.369                                | 0.728                                  |
| R <sup>2</sup>  | 0.385                     | 0.499   | 0.519  | 0.533                               | 0.485                                  | 0.589                                  | 0.487  | 0.620  | 0.484  | 0.561  | 0.437                                | 0.499                                  |
| <b>Panel C: Treatment effects with covariates selected with LASSO</b> |                           |   |  |                                     |  |  |  |  |  |  |                                      |  |
| <b>Panel C.1: Sample course Delivery Online</b>                       |                           |   |  |                                     |  |  |  |  |  |  |                                      |  |
| Course and verification   | -0.084 (0.184)            | 0.539*** (0.186)  | -0.180 (0.174)   | 0.099 (0.204)                       | -0.009 (0.198)                         | 0.209 (0.173)                          | 0.260 (0.184)  | 0.525*** (0.143)                                   | 0.121 (0.153)  | -0.203 (0.167)   | 0.085 (0.203)                        | 0.110 (0.174)                          |
| Course  | 0.009 (0.233)             | 0.007 (0.193)   | 0.313 (0.201)  | -0.219 (0.190)                      | 0.065 (0.193)                          | 0.187 (0.176)                          | 0.539*** (0.183)                                     | 0.661*** (0.136)                                   | -0.173 (0.157)   | -0.162 (0.156)   | 0.261 (0.224)                        | 0.228 (0.185)                          |
| Verification  | -0.149 (0.168)            | 0.072 (0.165)   | -0.179 (0.169)   | -0.100 (0.170)                      | -0.086 (0.202)                         | 0.334** (0.156)                        | 0.152 (0.176)  | -0.035 (0.114)                                     | 0.120 (0.130)  | -0.260* (0.157)  | 0.404** (0.183)                      | -0.072 (0.182)                         |
| Course and Verification (p-value)                                     | 0.649                     | 0.004   | 0.303  | 0.629                               | 0.963                                  | 0.228                                  | 0.158  | 0  | 0.43   | 0.225  | 0.675                                | 0.526                                  |
| Course (p-value)  | 0.969                     | 0.97  | 0.12   | 0.249                               | 0.736                                  | 0.288                                  | 0.003  | 0  | 0.271  | 0.299  | 0.245                                | 0.218                                  |
| Verification (p-value)  | 0.375                     | 0.664   | 0.292  | 0.556                               | 0.672                                  | 0.033                                  | 0.387  | 0.761  | 0.357  | 0.099  | 0.028                                | 0.692                                  |
| $\tau_1 = 0$ (p-value)  | 0.8536                    | 0.0161  | 0.12   | 0.4872                              | 0.9217                                 | 0.314                                  | 0.0661   | 0  | 0.5019   | 0.4255   | 0.1447                               | 0.5054                                 |
| <b>C.2 Sample Course Delivery WhatsApp</b>                            |                           |   |  |                                     |  |  |  |  |  |  |                                      |  |
| Course and verification   | -0.028 (0.147)            | 0.085 (0.133)   | 0.305* (0.160)   | 0.173 (0.142)                       | 0.121 (0.156)                          | 0.358* (0.193)                         | 0.091 (0.148)  | 0.200 (0.123)                                      | -0.110 (0.154)   | 0.285** (0.143)  | -0.007 (0.137)                       | 0.169 (0.151)                          |
| Course  | -0.226 (0.155)            | -0.135 (0.138)  | 0.139 (0.163)  | 0.200 (0.148)                       | 0.261* (0.153)                         | 0.025 (0.211)                          | 0.080 (0.129)  | 0.100 (0.121)                                      | -0.029 (0.180)   | 0.414*** (0.133)   | 0.085 (0.147)                        | 0.025 (0.155)                          |
| Verification  | -0.176 (0.160)            | 0.019 (0.141)   | 0.215 (0.137)  | 0.072 (0.156)                       | 0.149 (0.155)                          | 0.046 (0.146)                          | 0.096 (0.157)  | 0.026 (0.124)                                      | -0.002 (0.160)   | 0.447*** (0.143)   | 0.279 (0.172)                        | 0.173 (0.123)                          |
| Course and Verification (p-value)                                     | 0.848                     | 0.525   | 0.057  | 0.227                               | 0.438                                  | 0.065                                  | 0.537  | 0.105  | 0.478  | 0.047  | 0.957                                | 0.263                                  |
| Course (p-value)  | 0.147                     | 0.328   | 0.396  | 0.177                               | 0.09                                   | 0.907                                  | 0.536  | 0.409  | 0.872  | 0.002  | 0.564                                | 0.872                                  |
| Verification (p-value)  | 0.272                     | 0.892   | 0.118  | 0.643                               | 0.336                                  | 0.754                                  | 0.544  | 0.833  | 0.989  | 0.002  | 0.107                                | 0.159                                  |
| $\tau_1 + \tau_2 = 0$ (p-value)                                       | 0.569                     | 0.641   | 0.4  | 0.652                               | 0.57                                   | 0.154                                  | 0.939  | 0.533  | 0.921  | 0.029  | 0.449                                | 0.674                                  |
| Outcome mean  | 0                         | 0   | 0  | 0                                   | 0                                      | 0                                      | 0  | 0  | 0  | 0  | 0                                    | 0                                      |
| Outcome std. dev.   | 1                         | 1   | 1  | 1                                   | 1                                      | 1                                      | 1  | 1  | 1  | 1  | 1                                    | 1                                      |
| Outcome range   | [-3.2,0.6]                | [-4.1,3.1]  | [-3.8,2.5]   | [-2.6,2.2]                          | [-3.4,1.7]                             | [-3.6,1.4]                             | [-3.3,2.5]   | [-3.3,2.1]   | [-2.8,1.8]   | [-1.7,3.3]   | [-3.5,1]                             | [-3.1,3]                               |
| Num. LASSO covariates   | 0                         | 9   | 8  | 2                                   | 8                                      | 7                                      | 8  | 7  | 12   | 3  | 6                                    | 7                                      |
| Observations  | 463                       | 463   | 463  | 463                                 | 463                                    | 463                                    | 463  | 463  | 463  | 463  | 463                                  | 463                                    |
| R <sup>2</sup>  | 0.480                     | 0.873   | 0.930  | 0.799                               | 0.880                                  | 0.929                                  | 0.636  | 0.907  | 0.593  | 0.646  | 0.724                                | 0.832                                  |

Notes: We report estimates from OLS regression including randomization block fixed effects. All specifications in all panels include the corresponding outcome variables at baseline as a control. Specifications in Panel A and B further include covariates in the outcome family as controls. Specifications in Panel A and B further include covariates in the outcome family as controls. Specifications in Panel C are from a 10-fold cross validation LASSO model with lambda chosen to be that of the minimum average cross-validated error. The treatment indicators, lagged dependent variable, and fixed effects are forced into the LASSO model and covariates are selected from a pool of 72 baseline variables for each specification. Robust standard errors are in parentheses.  $\tau_1$  is the vector of parameters for the treatment groups in the Online sample, and  $\tau_1 + \tau_2$  captures the effect for the WhatsApp sample as in equation S1. \* denotes  $p < 0.1$ , \*\* denotes  $p < 0.05$ , and \*\*\* denotes  $p < 0.01$ .

Figure S7: Treatment effect comparison between the OLS, and WLS with restricted Americas Barometer (WLS Americas) and restricted Latin Barometer (WLS Latin) weights on mechanisms: misinformation importance and attention to misinformation

(a) Sample course delivery online



(b) Sample course delivery WhatsApp

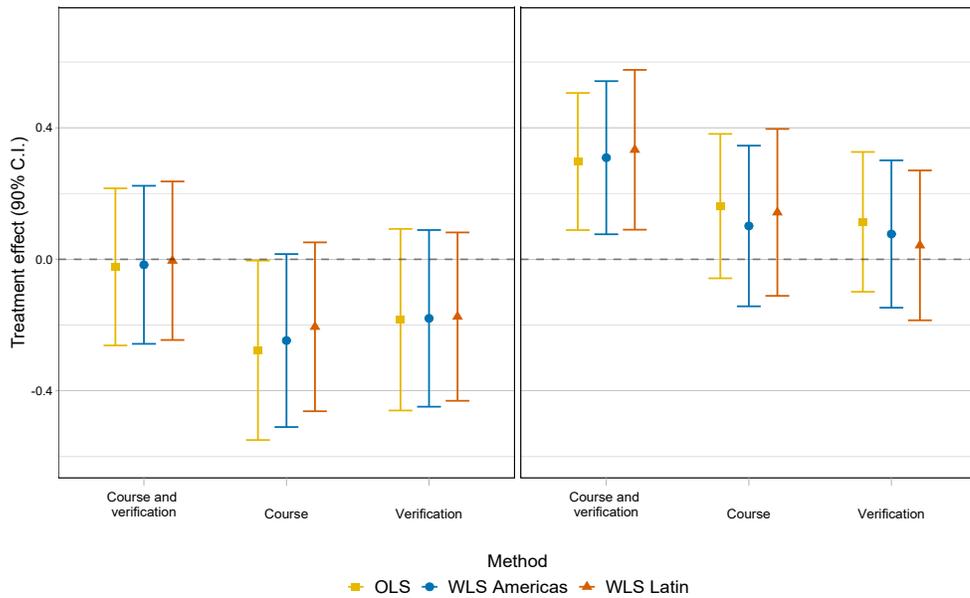
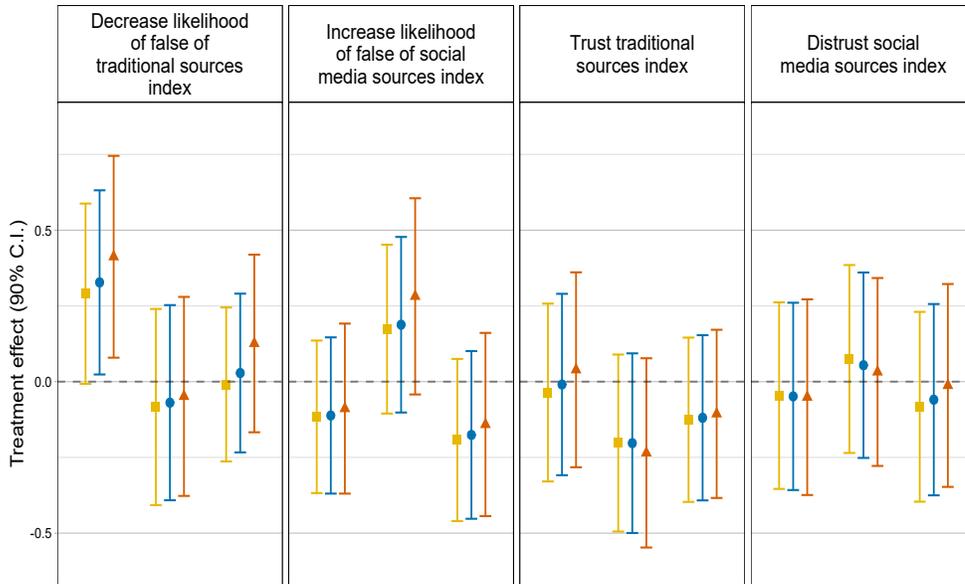


Figure S8: Treatment effect comparison between the OLS, and WLS with restricted Americas Barometer (WLS Americas) and restricted Latin Barometer (WLS Latin) weights on mechanisms: likelihood of false and distrust of traditional and social media sources

(a) Sample course delivery online



(b) Sample course delivery WhatsApp

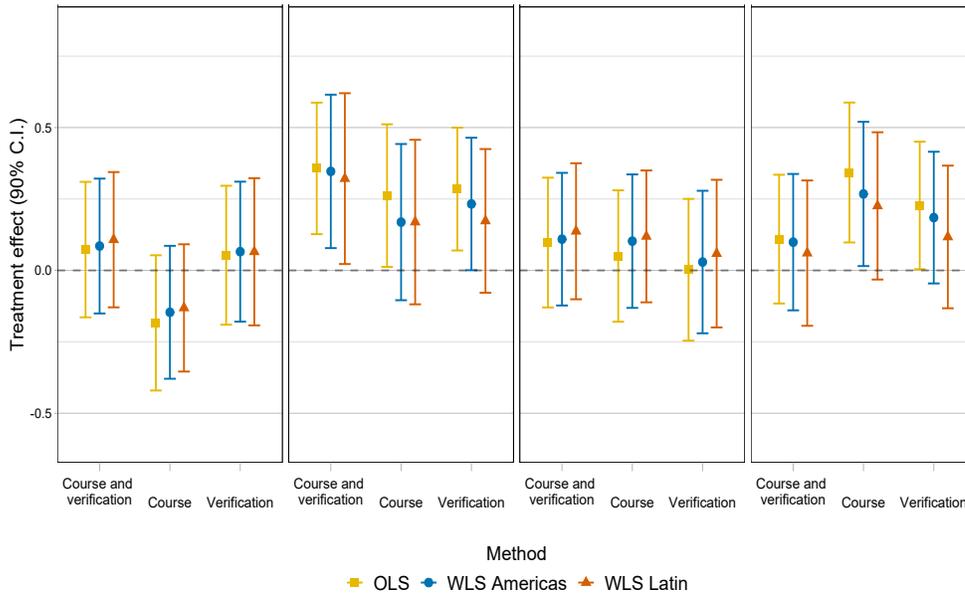
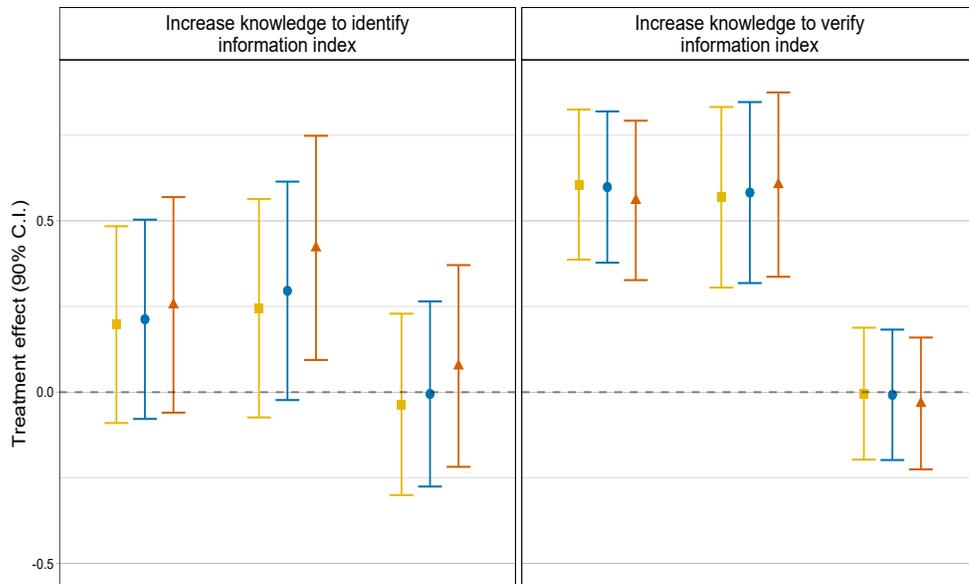


Figure S9: Treatment effect comparison between the OLS, and WLS with restricted Americas Barometer (WLS Americas) and restricted Latin Barometer (WLS Latin) weights on knowledge to identify and verify information

(a) Sample course delivery online



(b) Sample course delivery WhatsApp

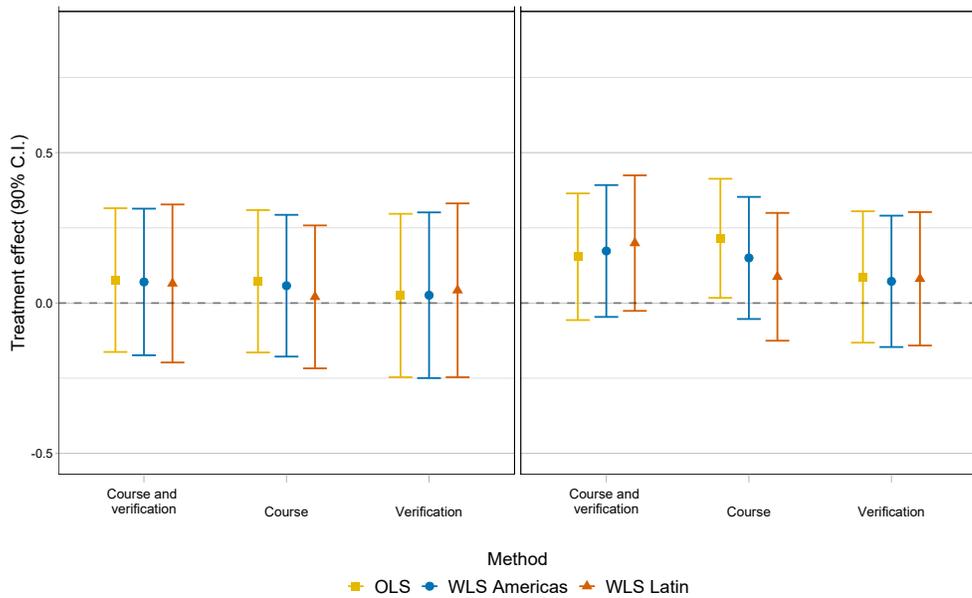
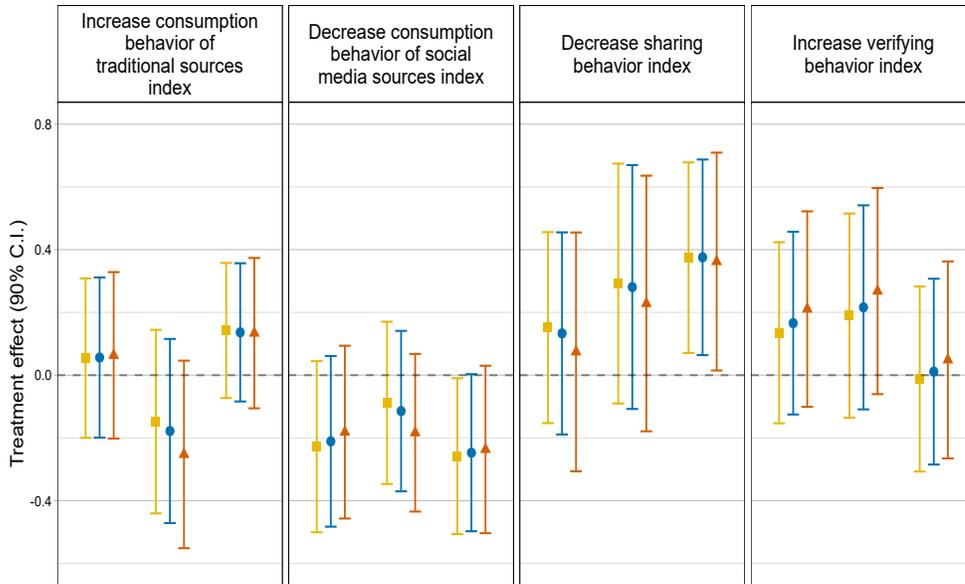
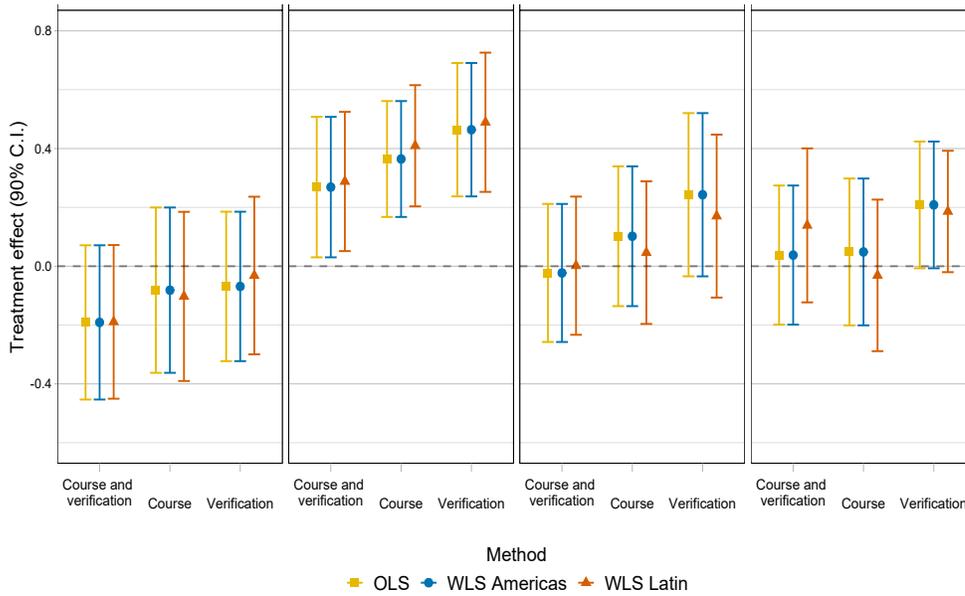


Figure S10: Treatment effect comparison between the OLS, and WLS with restricted Americas Barometer (WLS Americas) and restricted Latin Barometer (WLS Latin) weights on consumption, sharing, and verifying behavior

(a) Sample course delivery online



(b) Sample course delivery WhatsApp



## Social media analysis

Table S26: Difference in attrition reporting social media at baseline, posting at least once within one-month after the intervention, and number of posts

|  | Differential<br>Attrition reporting<br>social media<br>account<br>(1) | Posted at least<br>once within<br>1 month after the<br>intervention began<br>(2) | Number<br>of posts<br>(log)<br>(3) |
|--|---|--|------------------------------------|
| <b>A.1 Sample course Delivery Online</b>   |   |  |                                    |
| Course and verification                    | -0.044<br>(0.074)   | -0.095<br>(0.102)  | -0.183<br>(0.353)                  |
| Course                                     | 0.089<br>(0.077)  | -0.102<br>(0.103)  | -0.373<br>(0.325)                  |
| Verification                               | -0.020<br>(0.076)   | -0.074<br>(0.105)  | -0.548<br>(0.335)                  |
| Course and Verification (p-value)          | 0.556   | 0.353  | 0.606                              |
| Course (p-value)                           | 0.244   | 0.321  | 0.251                              |
| Verification (p-value)                     | 0.794   | 0.483  | 0.102                              |
| $\tau_1 = 0$ (p-value)                     | 0.4191  | 0.7266   | 0.3946                             |
| <b>A.2 Sample Course Delivery WhatsApp</b> |   |  |                                    |
| Course and verification                    | -0.015<br>(0.060)   | 0.082<br>(0.067)   | 0.208<br>(0.216)                   |
| Course                                     | -0.051<br>(0.060)   | -0.039<br>(0.060)  | -0.029<br>(0.173)                  |
| Verification                               | -0.078<br>(0.059)   | 0.075<br>(0.072)   | 0.301<br>(0.222)                   |
| Course and Verification (p-value)          | 0.8   | 0.22   | 0.337                              |
| Course (p-value)                           | 0.393   | 0.517  | 0.867                              |
| Verification (p-value)                     | 0.19  | 0.297  | 0.175                              |
| $\tau_1 + \tau_2 = 0$ (p-value)            | 0.572   | 0.373  | 0.549                              |
| Outcome mean                               | 0.494   | 0.321  | 0.544                              |
| Control mean                               | 0.516   | 0.324  | 0.566                              |
| Observations                               | 838   | 414  | 414                                |
| R <sup>2</sup>                             | 0.095   | 0.276  | 0.168                              |

*Notes:* We report estimates from OLS regression including randomization block fixed effects. Robust standard errors are in parentheses.  $\tau_1$  is the vector of parameters for the treatment groups in the Online sample, and  $\tau_1 + \tau_2$  captures the effect for the WhatsApp sample as in equation S1. \* denotes  $p < 0.1$ , \*\* denotes  $p < 0.05$ , and \*\*\* denotes  $p < 0.01$ .

Table S27: Treatment Effects on information shared on social media

|  | Share<br>misinformation<br>index<br>(1) | Share<br>fact-checks<br>(2) |
|--|---|-----------------------------|
| <b>A.1 Sample course Delivery Online</b>   |   |                             |
| Course and verification                    | -0.392*<br>(0.228)                      | 0.012<br>(0.016)            |
| Course                                     | -0.197<br>(0.209)                       | 0.053<br>(0.034)            |
| Verification                               | -0.385**<br>(0.188)                     | -0.018<br>(0.016)           |
| Course and Verification (p-value)          | 0.089                                   | 0.443                       |
| Course (p-value)                           | 0.351                                   | 0.129                       |
| Verification (p-value)                     | 0.044                                   | 0.269                       |
| $\tau_1 = 0$ (p-value)                     | 0.3792                                  | 0.3684                      |
| <b>A.2 Sample Course Delivery WhatsApp</b> |   |                             |
| Course and verification                    | 0.137<br>(0.291)                        | -0.001<br>(0.020)           |
| Course                                     | 0.037<br>(0.348)                        | -0.037<br>(0.039)           |
| Verification                               | 0.157<br>(0.371)                        | 0.041<br>(0.030)            |
| Course and Verification (p-value)          | 0.64                                    | 0.98                        |
| Course (p-value)                           | 0.915                                   | 0.349                       |
| Verification (p-value)                     | 0.673                                   | 0.177                       |
| $\tau_1 + \tau_2 = 0$ (p-value)            | 0.971                                   | 0.674                       |
| Outcome mean                               | 0                                       | 0.023                       |
| Outcome std. dev.                          | 1                                       | 0.149                       |
| Outcome range                              | [-1.1,5.4]                              | [0,1]                       |
| Observations                               | 133                                     | 133                         |
| R <sup>2</sup>                             | 0.716                                   | 0.716                       |

*Notes:* We report estimates from OLS regression including randomization block fixed effects. Specifications further include the corresponding outcome variables at baseline as controls. Robust standard errors are in parentheses.  $\tau_1$  is the vector of parameters for the treatment groups in the Online sample, and  $\tau_1 + \tau_2$  captures the effect for the WhatsApp sample as in equation S1. \* denotes  $p < 0.1$ , \*\* denotes  $p < 0.05$ , and \*\*\* denotes  $p < 0.01$ .

Table S28: Bayes Factor for statistically insignificant coefficients in our main indexes estimates

| Index   | Online sample           |        |              | WhatsApp sample         |         |              |
|---|-------------------------|--------|--------------|-------------------------|---------|--------------|
|   | Course and Verification | Course | Verification | Course and Verification | Course  | Verification |
| Misinformation importance                             | 0.313                   | 0.46   | 0.56         | 0.106                   | 0.248   | 0.818        |
| Decrease likelihood of false of traditional sources   | 0.743                   | 0.434  | 0.282        | 0.224                   | 0.119   | 0.29         |
| Increase likelihood of false of social media sources  | 0.251                   | 1.515  | 0.282        | -                       | 0.316   | -            |
| Trust traditional sources                             | 0.343                   | 0.516  | 0.292        | 0.074                   | 0.154   | 0.305        |
| Distrust social media sources                         | 0.226                   | 0.873  | 0.288        | 0.161                   | -       | 0.339        |
| Attention to misinformation                           | 2.049                   | 1.072  | 0.4          | -                       | 0.279   | 0.383        |
| Increase knowledge to identify information            | 0.337                   | 0.737  | 0.342        | 0.088                   | 0.208   | 0.301        |
| Increase knowledge to verify information              | -                       | -      | 0.19         | 584.261                 | 157.431 | 0.195        |
| Increase consumption behavior of traditional sources  | 0.329                   | 0.243  | 0.264        | 0.121                   | 0.08    | 0.37         |
| Decrease consumption behavior of social media sources | 0.224                   | 0.396  | 0.221        | -                       | -       | -            |
| Decrease sharing behavior                             | 0.422                   | 0.735  | -            | 0.11                    | 0.174   | 2.067        |
| Increase verifying behavior                           | 0.273                   | 0.246  | 0.267        | 0.071                   | 0.088   | 0.283        |

*Notes:* We compute the Bayes Factor for each non-statistically significant coefficient at the 95% level in our main indexes when including all variables in the outcome family (as in panel A of Table S13). The Bayes Factor compares under the null hypothesis the corresponding treatment indicator equal to 0 and under the alternative hypothesis distinct than 0.

Table S29: Power tests for statistically insignificant coefficients in our main indexes estimates

| Index   | Online sample           |        |              | WhatsApp sample         |        |              |
|---|-------------------------|--------|--------------|-------------------------|--------|--------------|
|   | Course and Verification | Course | Verification | Course and Verification | Course | Verification |
| Misinformation importance                             | 0.546                   | 0.592  | 0.506        | 0.493                   | 0.491  | 0.516        |
| Decrease likelihood of false of traditional sources   | 0.546                   | 0.592  | 0.506        | 0.493                   | 0.491  | 0.516        |
| Increase likelihood of false of social media sources  | 0.546                   | 0.592  | 0.506        | -                       | 0.491  | -            |
| Trust traditional sources                             | 0.546                   | 0.592  | 0.506        | 0.493                   | 0.491  | 0.516        |
| Distrust social media sources                         | 0.546                   | 0.592  | 0.506        | 0.493                   | -      | 0.516        |
| Attention to misinformation                           | 0.546                   | 0.592  | 0.506        | -                       | 0.491  | 0.516        |
| Increase knowledge to identify information            | 0.546                   | 0.592  | 0.506        | 0.493                   | 0.491  | 0.516        |
| Increase knowledge to verify information              | -                       | -      | 0.506        | 0.493                   | 0.491  | 0.516        |
| Increase consumption behavior of traditional sources  | 0.546                   | 0.592  | 0.506        | 0.493                   | 0.491  | 0.516        |
| Decrease consumption behavior of social media sources | 0.546                   | 0.592  | 0.506        | 0.493                   | -      | -            |
| Decrease sharing behavior                             | 0.546                   | 0.592  | -            | 0.493                   | 0.491  | 0.516        |
| Increase verifying behavior                           | 0.546                   | 0.592  | 0.506        | 0.493                   | 0.491  | 0.516        |

*Notes:* We present the minimum detectable effect given our sample size, a significance level of 0.05, and power of 0.80. Throughout, we perform a two-sided test.

Table S30: Power tests for statistically insignificant coefficients in our main indexes estimates

| Index   | Online sample           |        |              | WhatsApp sample         |        |              |
|---|-------------------------|--------|--------------|-------------------------|--------|--------------|
|   | Course and Verification | Course | Verification | Course and Verification | Course | Verification |
| Misinformation importance                             | 0.484                   | 0.523  | 0.448        | 0.437                   | 0.435  | 0.457        |
| Decrease likelihood of false of traditional sources   | 0.484                   | 0.523  | 0.448        | 0.437                   | 0.435  | 0.457        |
| Increase likelihood of false of social media sources  | 0.484                   | 0.523  | 0.448        | -                       | 0.435  | -            |
| Trust traditional sources                             | 0.484                   | 0.523  | 0.448        | 0.437                   | 0.435  | 0.457        |
| Distrust social media sources                         | 0.484                   | 0.523  | 0.448        | 0.437                   | -      | 0.457        |
| Attention to misinformation                           | 0.484                   | 0.523  | 0.448        | -                       | 0.435  | 0.457        |
| Increase knowledge to identify information            | 0.484                   | 0.523  | 0.448        | 0.437                   | 0.435  | 0.457        |
| Increase knowledge to verify information              | -                       | -      | 0.448        | 0.437                   | 0.435  | 0.457        |
| Increase consumption behavior of traditional sources  | 0.484                   | 0.523  | 0.448        | 0.437                   | 0.435  | 0.457        |
| Decrease consumption behavior of social media sources | 0.484                   | 0.523  | 0.448        | 0.437                   | -      | -            |
| Decrease sharing behavior                             | 0.484                   | 0.523  | -            | 0.437                   | 0.435  | 0.457        |
| Increase verifying behavior                           | 0.484                   | 0.523  | 0.448        | 0.437                   | 0.435  | 0.457        |

*Notes:* We present the minimum detectable effect given our sample size, a significance level of 0.10, and power of 0.80. Throughout, we perform a two-sided test.