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Misinformation Exposure Beyond Traditional Feeds: Evidence from a WhatsApp Deactivation Experiment

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14 Encontro da ABCP

Social Media, Politics and Misinformation

④ Prevalence of misinformation:

- People aren't actually exposed to a lot of misinformation – but exposure is heavily concentrated. (Grinberg et. al. 2019, Guess et. al. 2019)

④ Downstream effects on attitudes: less than you think:

- Mixed evidence from Deactivating users from Facebook (Asimovic et. al. 2022, Alcott et. al. 2020, Arcenaux and Ladd 2023)
- Meta Election 2020 studies (Guess et al. 2023a,b; Nyhan et al. 2023)
- Null effects of exposure to misinformation campaigns from Russian bots on Twitter (Eady et al. 2023)

④ Majority of scholarly work comes from W.E.I.R.D countries:

- Over 80% of existing studies on interventions to correct misinformation focus on Global North countries (Blair et. al. 2023, Badrinathan and Chauchard, 2023a)
 - Despite the fact that the real-world effects of misinformation exposure may be more pronounced in these countries.

Disinformation Spreads on WhatsApp Ahead of Brazilian Election

 Give this article  



Fake News Is Poisoning Brazilian Politics. WhatsApp Can Stop It.

Oct. 17, 2018



Identify the causal effects of **WhatsApp usage** on **exposure to online rumors** and its downstream effects on **belief accuracy** and **political attitudes**

Deactivation Studies

American Economic Review 2020, 110(3): 629–676
<https://doi.org/10.1257/aer.20190658>

The Welfare Effects of Social Media[†]

By HUNT ALLCOTT, LUCA BRAGHIERI, SARAH EICHMEYER,
AND MATTHEW GENTZKOW*

The rise of social media has provoked both optimism about potential societal benefits and concern about harms such as addiction, depression, and political polarization. In a randomized experiment, we find that deactivating Facebook for the four weeks before the 2018 US midterm election (i) reduced online activity, while increasing offline activities such as watching TV alone and socializing with family and friends; (ii) reduced both factual news knowledge and political polarization; (iii) increased subjective well-being; and (iv) caused a large persistent reduction in post-experiment Facebook use. Deactivation reduced post-experiment valuations of Facebook, suggesting that traditional metrics may overstate consumer surplus. (JEL D12, D72, D90, I31, L82, L86, Z13)

Social media have had profound impacts on the modern world. Facebook, which remains by far the largest social media company, has 2.3 billion monthly active users worldwide (Facebook 2018). As of 2016, the average user was spending 50 minutes per day on Facebook and its sister platforms Instagram and Messenger (Facebook 2016). There may be no technology since television that has so dramatically reshaped the way people get information and spend their time.

Speculation about social media's welfare impact has followed a familiar trajectory, with early optimism about potential benefits giving way to widespread concern about possible harms. At a basic level, social media dramatically reduce the cost of connecting, communicating, and sharing information with others. Given that interpersonal connections are among the most important drivers of happiness and

Facebook Deactivation in the US (Alcott et al., 2020)

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Facebook Deactivation in Bosnia and Herzegovina (Asimovic et. al, 2022)



Testing the effects of Facebook usage in an ethnically polarized setting

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Despite the belief that social media is altering intergroup dynamics—bringing people closer or further alienating them from one another—the impact of social media on interethnic attitudes has yet to be rigorously evaluated, especially within areas with tensions between ethnic groups. We conducted a randomized controlled trial in Bosnia and Herzegovina (B&H), exploring the effects of exposure to social media during 1 wk around genocide remembrance in July 2019 on a set of interethnic attitudes of Facebook users. We find evidence that, compared to previous work, which used a within-subjects design, those who deactivate profiles report lower regard for ethnic outgroups than those who remained active. Moreover, we present additional evidence suggesting that this effect is likely conditional on the level of ethnic heterogeneity of one's residence. We also provide the analysis of individual measures of subjective well-being and knowledge of news. Here, we find that Facebook deactivation leads to suggestive improvements in subjective well-being and a decrease in knowledge of current events, replicating results from recent research in the United States in a very different context, thus increasing our confidence in the generalizability of these effects.

spaces can help or hinder the goal of transforming relations from antagonistic to constructive, social media should be considered and studied as one of the forces influencing the direction of countries' postcolonial ethnic and partisan identities. Partisanship and ethnicity are potential markers of one's identity. Given that partisanship is acquired by choice, however, it is a more informative measure of one's worldview than group membership based on more immutable characteristics such as ethnicity or race (10). As such, some proponents of social media argue that partisans are more responsible to others for their partisanship than for their inborn group affiliations (11). The differences between partisan and other social identities have recently been discussed as a potential explanation of why intergroup contact, which tends to be associated with greater reconciliation (12–14), may be less effective at mitigating outgroup hostility in the context of partisanship (15). This, however, remains an open question requiring studies that go beyond partisan affiliation, in particular addressing attitudes toward ethnic outgroups and especially in an online context.

POLITICAL SCIENCES

Our Experiment

④ **Our Design:** Cut the primary channels through which users are exposed to misinformation and polarizing content: videos, images and audios (Machado et al., 2019; Resende et al., 2019; Garimella and Tyson, 2018; Garimella and Eckles, 2020; Batista Pereira et al., 2023).

④ **Experiment:** Offer respondents a monetary incentive to

- Disable their automatic download of media on WhatsApp.
- Do not purposefully click and watch any media on WhatsApp.

④ **Treatment Period:** Three weeks:

- **Start:** Three weeks before general election in Brazil.
- **End:** three days after the voting day.

④ **Outcomes:**

- Exposure and Beliefs to online misinformation,
- Outgroup polarization
- Subjective well-being.

Overview of the Experiment

Recruitment

Method: Facebook Ads targeting adults Brazil

Treatment
Assignment

Started Recruitment: September 8th

Deactivation

Number of respondents: 1,947

Intervention

Screening variables:

Compliance

- Willingness to join: 1,8861 participants

Compliance II

- More 5min WhatsApp daily

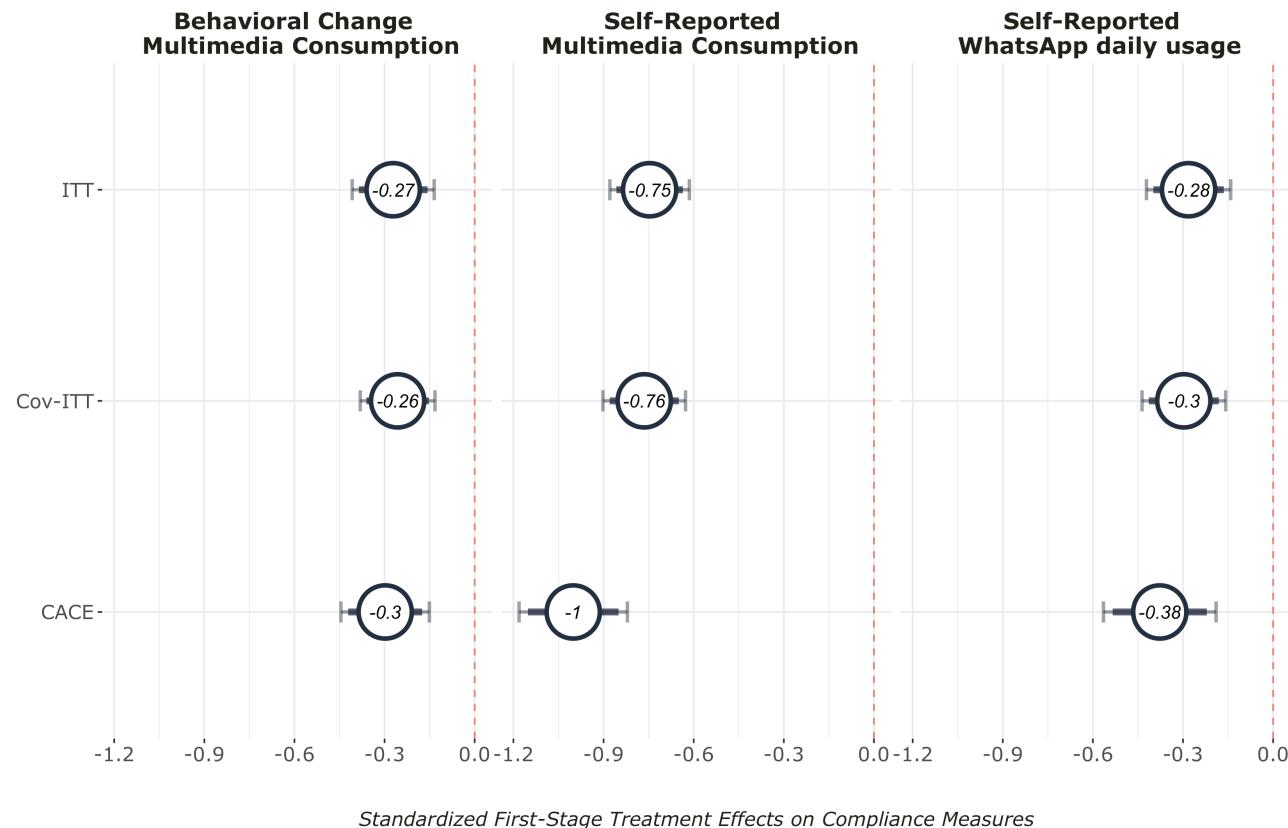
Outcomes

- Only WhatsApp mobile

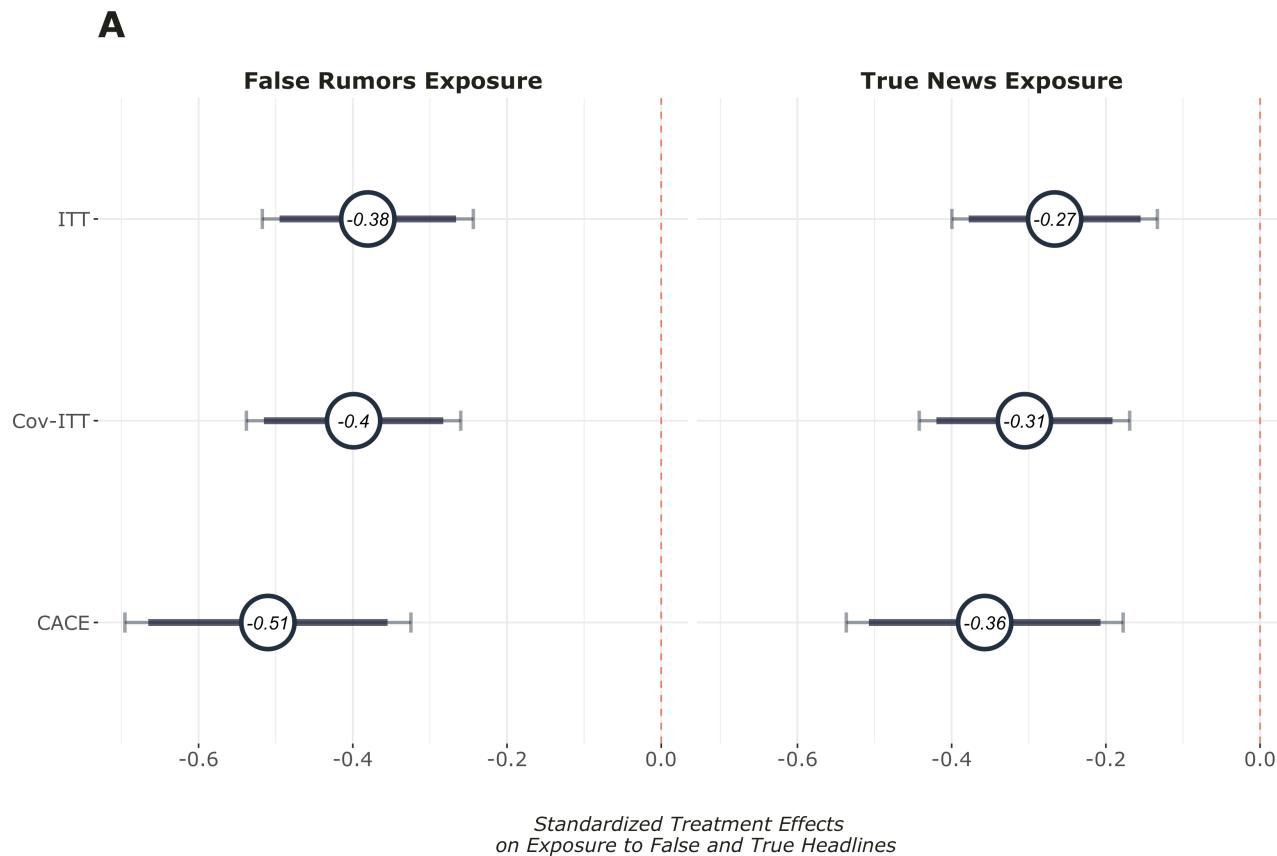
- More than 2 min to complete recruitment + other quality controls

Results

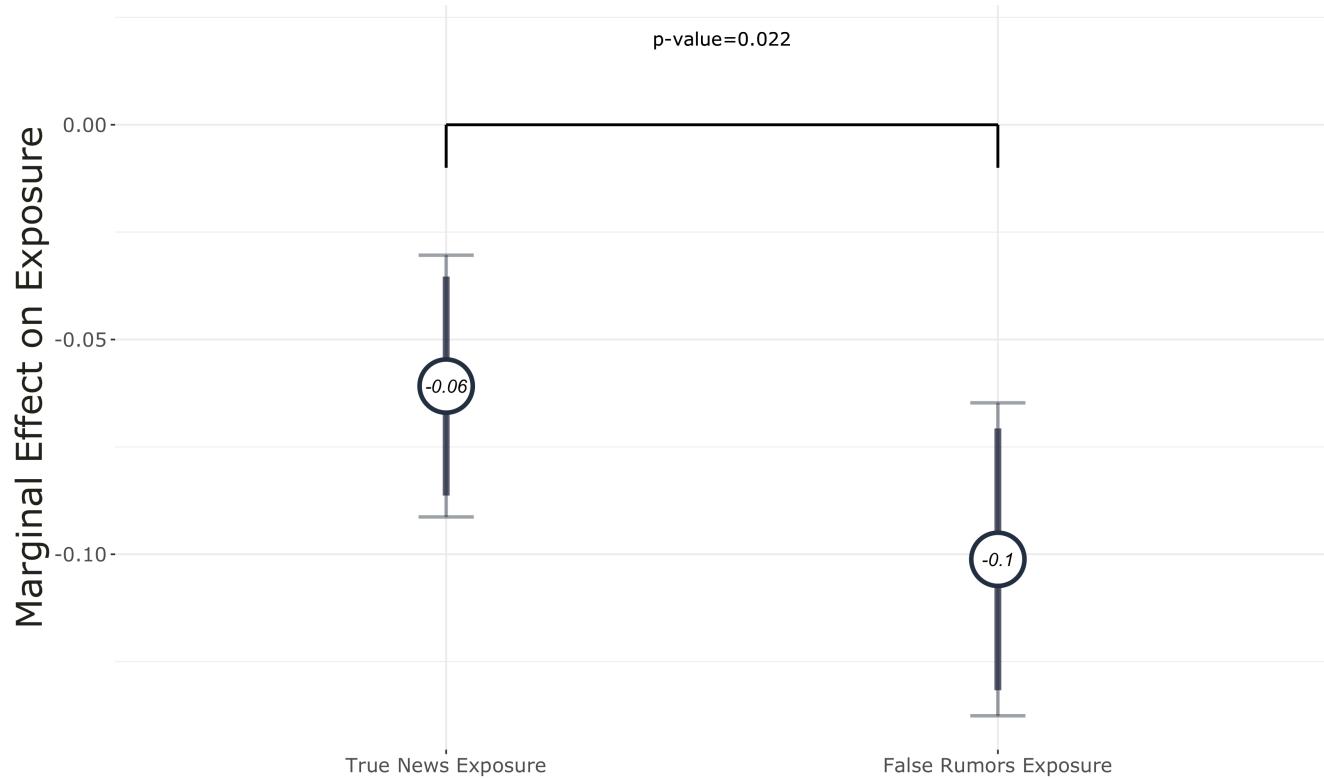
First-Stage Results



Effects on Exposure to Misinformation Rumors (H1)

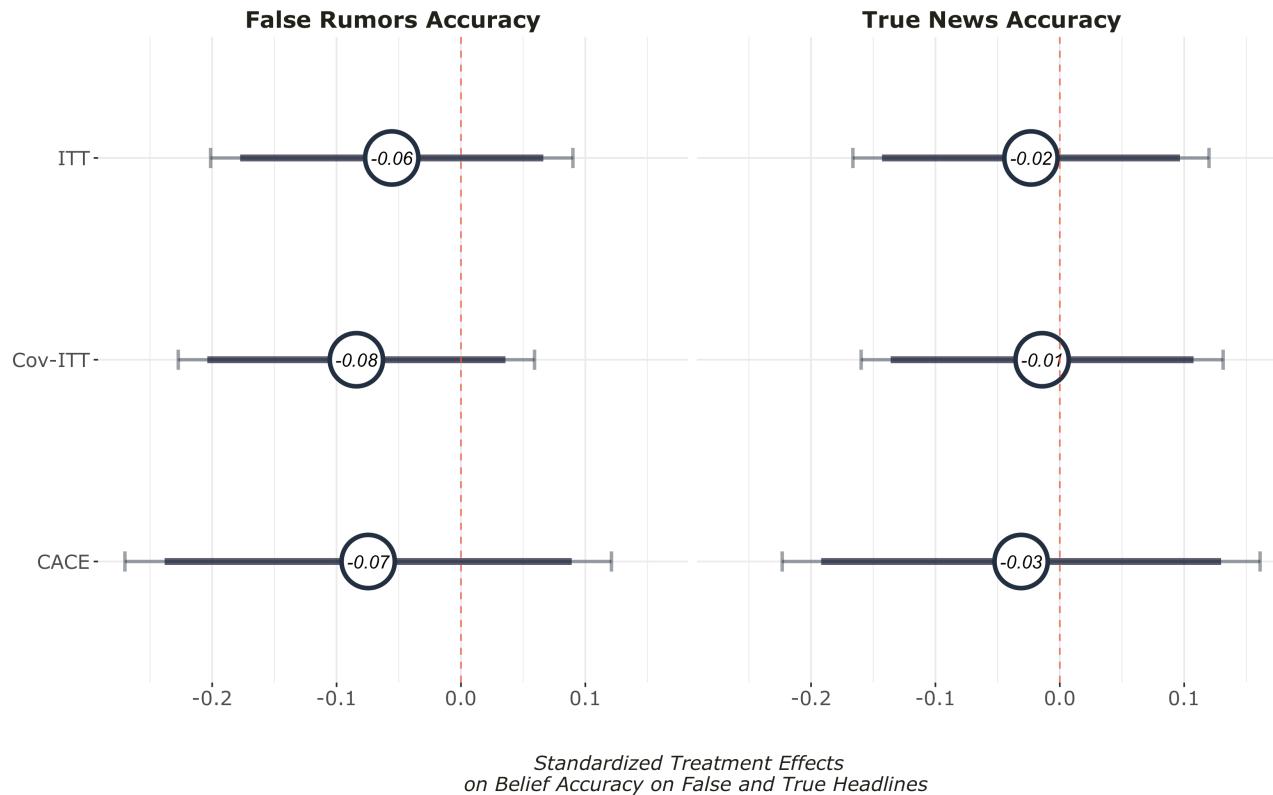


Reduction in exposure is large for false news (H1)

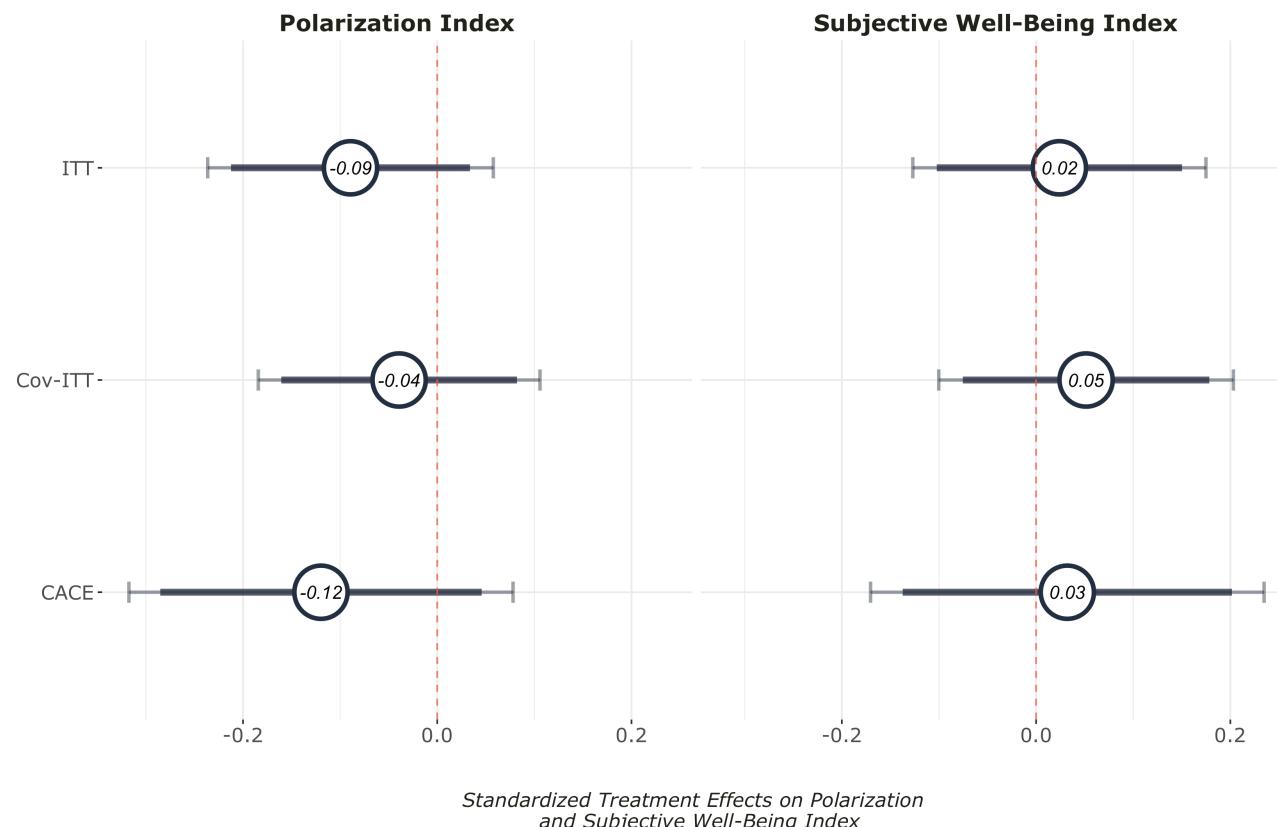


Effects on Belief Accuracy (H2)

B

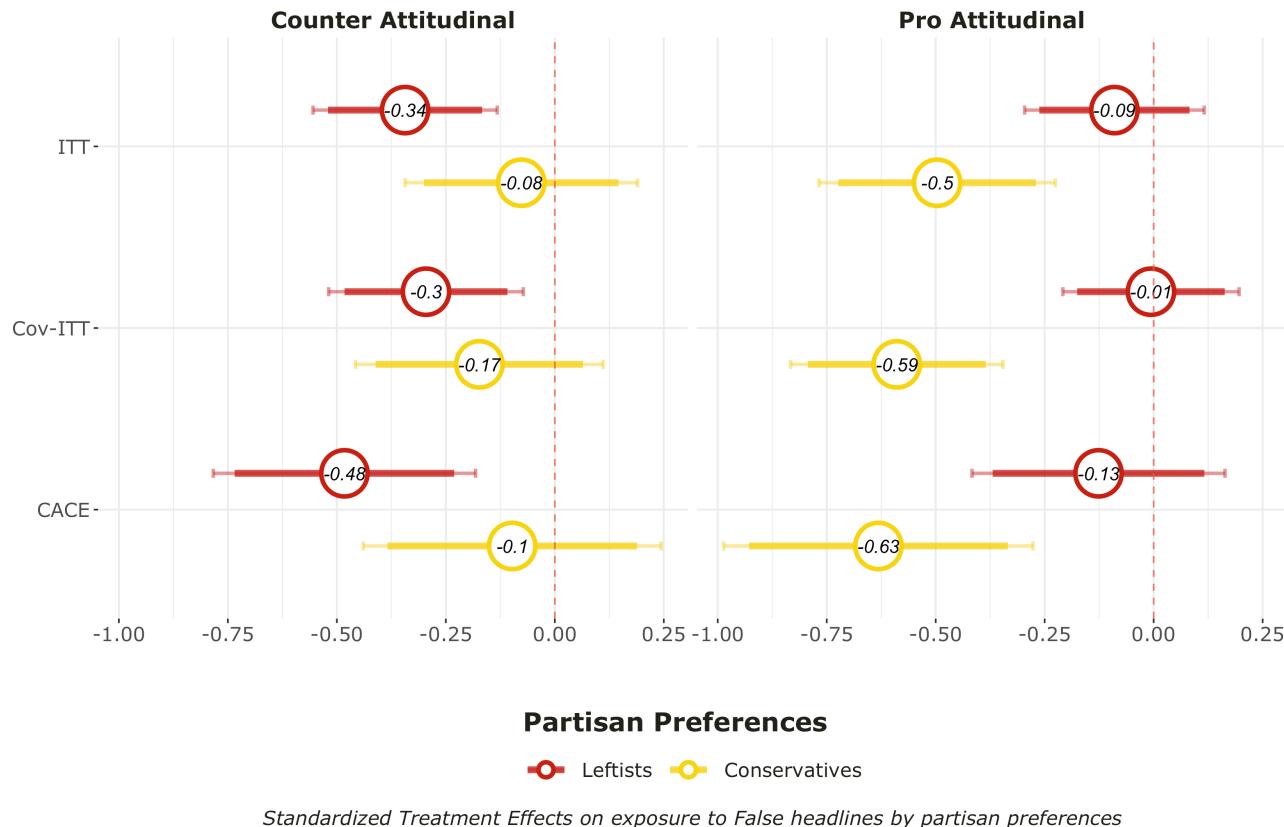


Effects on Polarization & Subjective Well-Being (H3 & H4)

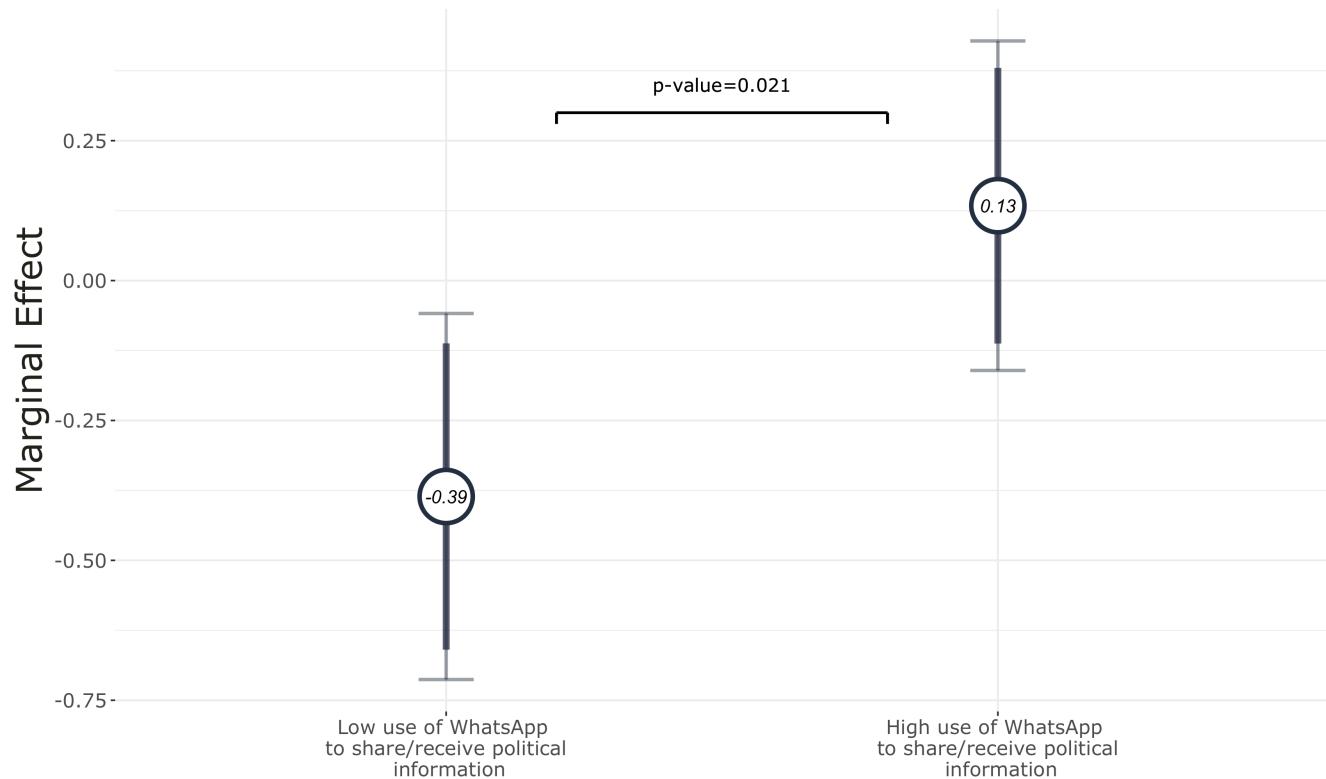


Additional Analyses (Non Pre-Registered)

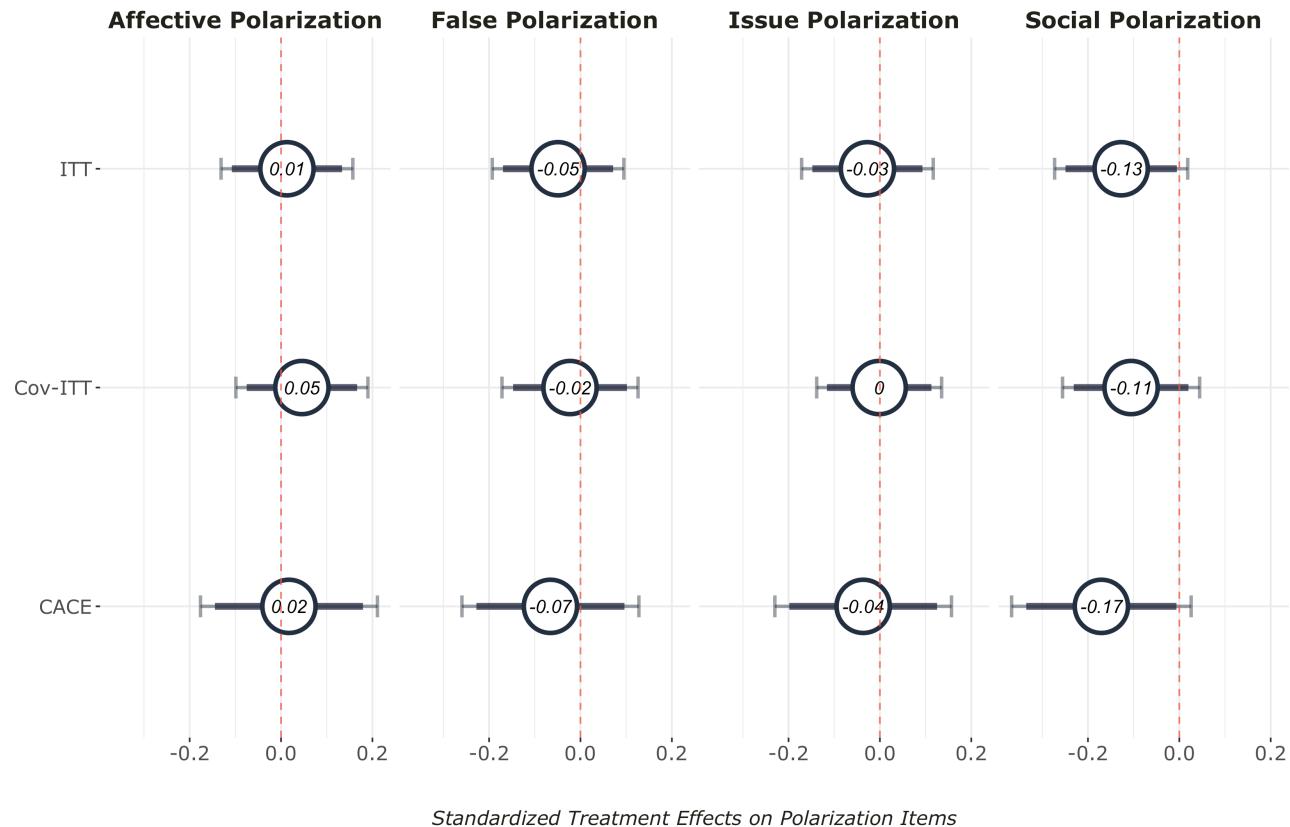
Exposure and Partisanship



Belief Accuracy Conditional on WhatsApp usage for Politics



Polarization Outcomes



Discussion

- ⊕ WhatsApp is an important vector through which voters receive misinformation in Brazil at a higher rate compared to true news.
- ⊕ The null results provide support for a minimalist view of the short-term causal effects of exposure to misinformation on WhatsApp on political attitudes.
- ⊕ Exposure to misinformation does not mechanically affect attitudes

Limitations

- ⊕ **Scope conditions:** focus on direct effects of exposure to misinformation on WhatsApp & and short-term effects.
- ⊕ **Our study does not** rule out the use of WhatsApp (and other messaging apps) as a mobilization and organizational tool by malicious actors.
- ⊕ Larger effect might exist exactly on **hard to reach population**.
- ⊕ **Small effect size & power constraints**
- ⊕ Electoral context & role of **directional** motivated reasoning

Thank you!

