



WhatsApp increases exposure to false rumors but has limited effects on beliefs and polarization: Evidence from a multimedia constrained deactivation experiment

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Motivation

*Disinformation Spreads on WhatsApp
Ahead of Brazilian Election*



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

Oct. 17, 2018



Research Goal

Provide causal estimates for the effects of exposure to misinformation on WhatsApp on political outcomes.

WhatsApp Multimedia Deactivation Field Experiment during the three weeks leading up to the 2022 Presidential Election in Brazil.

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.

Overview of the Experiment

Treatment Assignment

Start: September 15.

Treatment:

- Turn off the automatic download.
- Three **weeks** without consuming any multimedia.

Control: Three **days** without consuming any multimedia.

Invited: 1,135 respondents

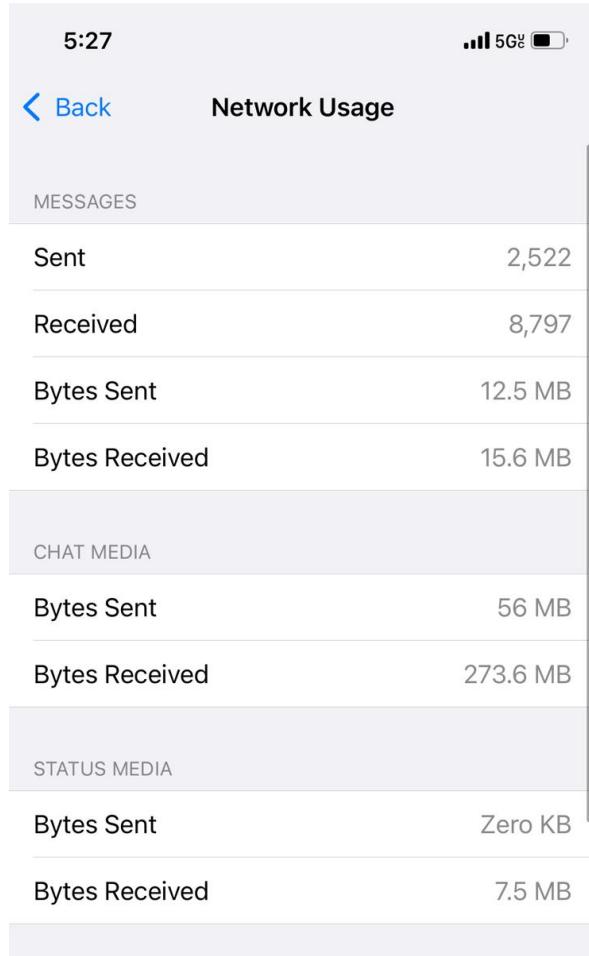
Completed: 773 respondents



Compliance Checks

Compliance Tasks:

- Screenshots of WhatsApp storage information
- Every week + final survey
- After the first compliance check, the control group was activated



A screenshot of a mobile phone displaying WhatsApp network usage statistics. The screen shows the following data:

MESSAGES	
Sent	2,522
Received	8,797
CHAT MEDIA	
Bytes Sent	12.5 MB
Bytes Received	15.6 MB
STATUS MEDIA	
Bytes Sent	56 MB
Bytes Received	273.6 MB
MEDIA	
Bytes Sent	Zero KB
Bytes Received	7.5 MB

Outcomes

Self-Reported Exposure and Accuracy Judgment

- False Rumors published on fact-checking webpages during the month of the experiment + True News stories headlines from mainstream media.

Polarization

- Affective polarization (Feeling Thermometer).
- Social Polarization (Willingness to engage with outgroup voter).
- Issue Polarization (Abortion, gun control, etc..).
- Perceptions about ideological polarization ('Where do I observe the two main candidates?').

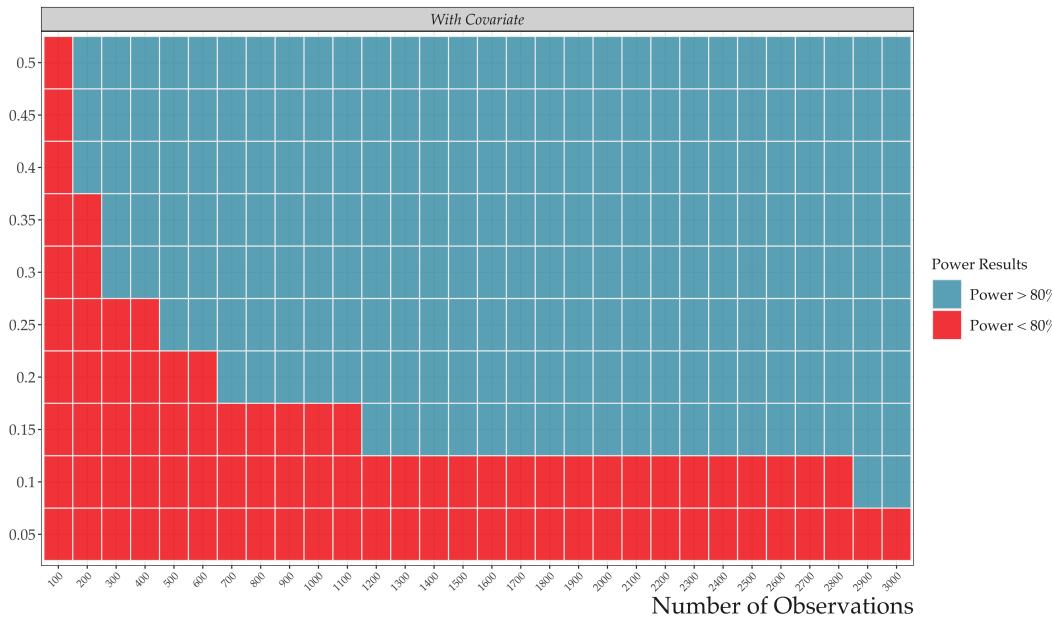
Subjective Well-being

- How did you feel for the past three weeks? (Happy, Anxious, etc...).

Recruitment and Power Analysis

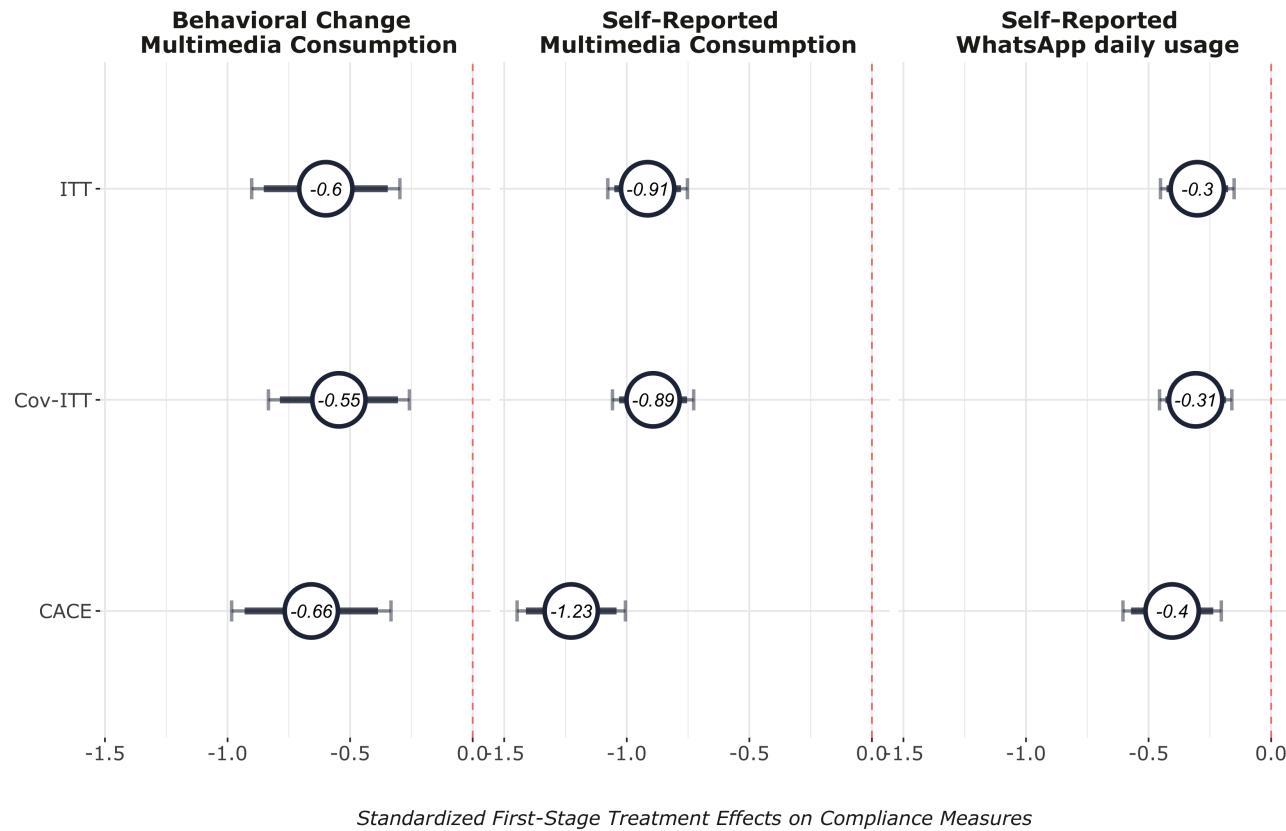
Complete Responses: 732.

Attrition Rate: 5.3%.

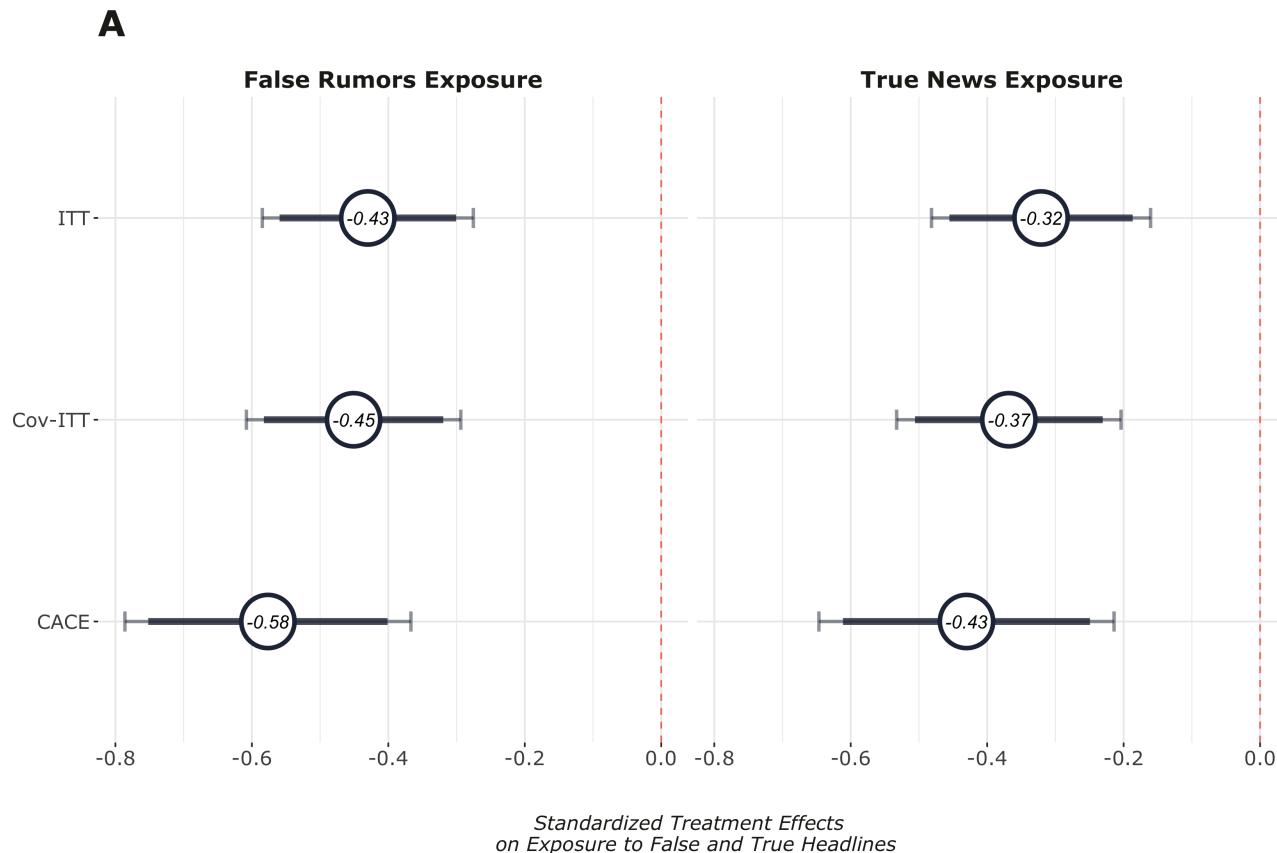


Results

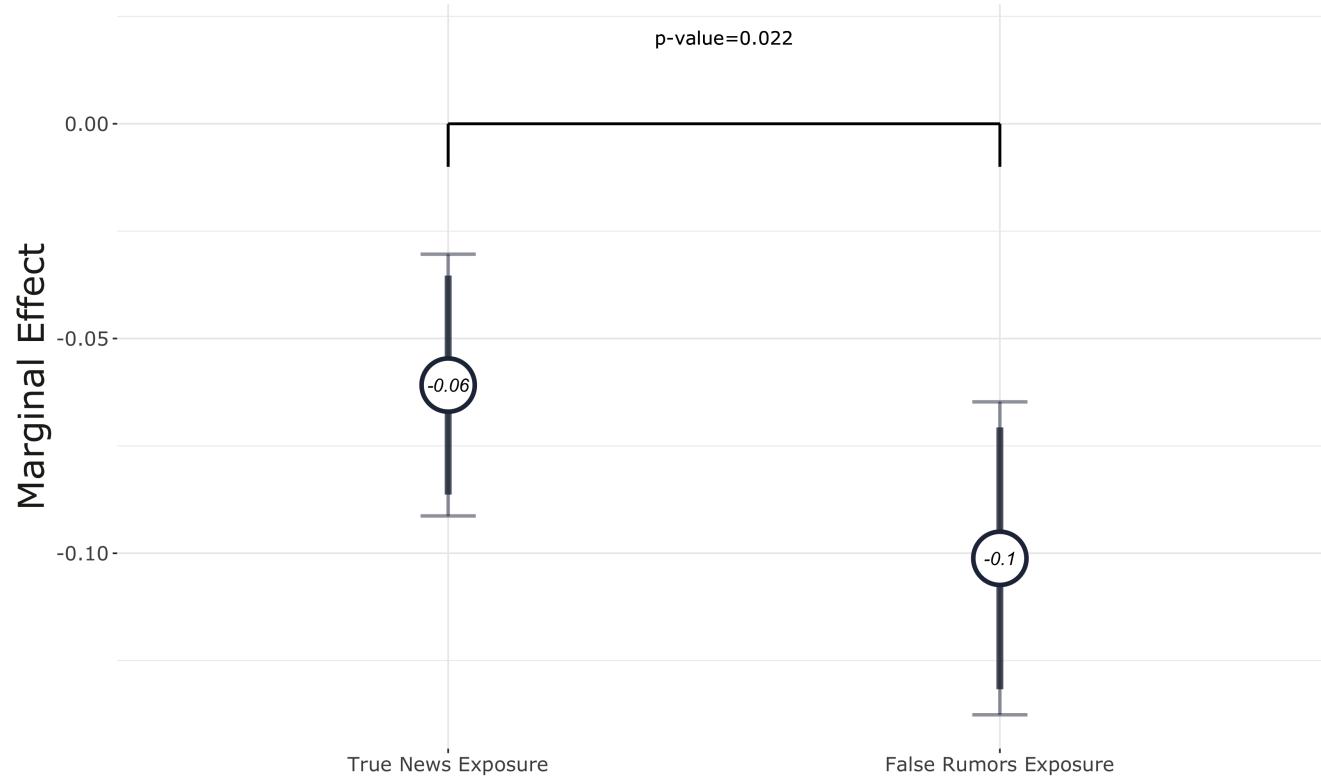
First-Stage Results



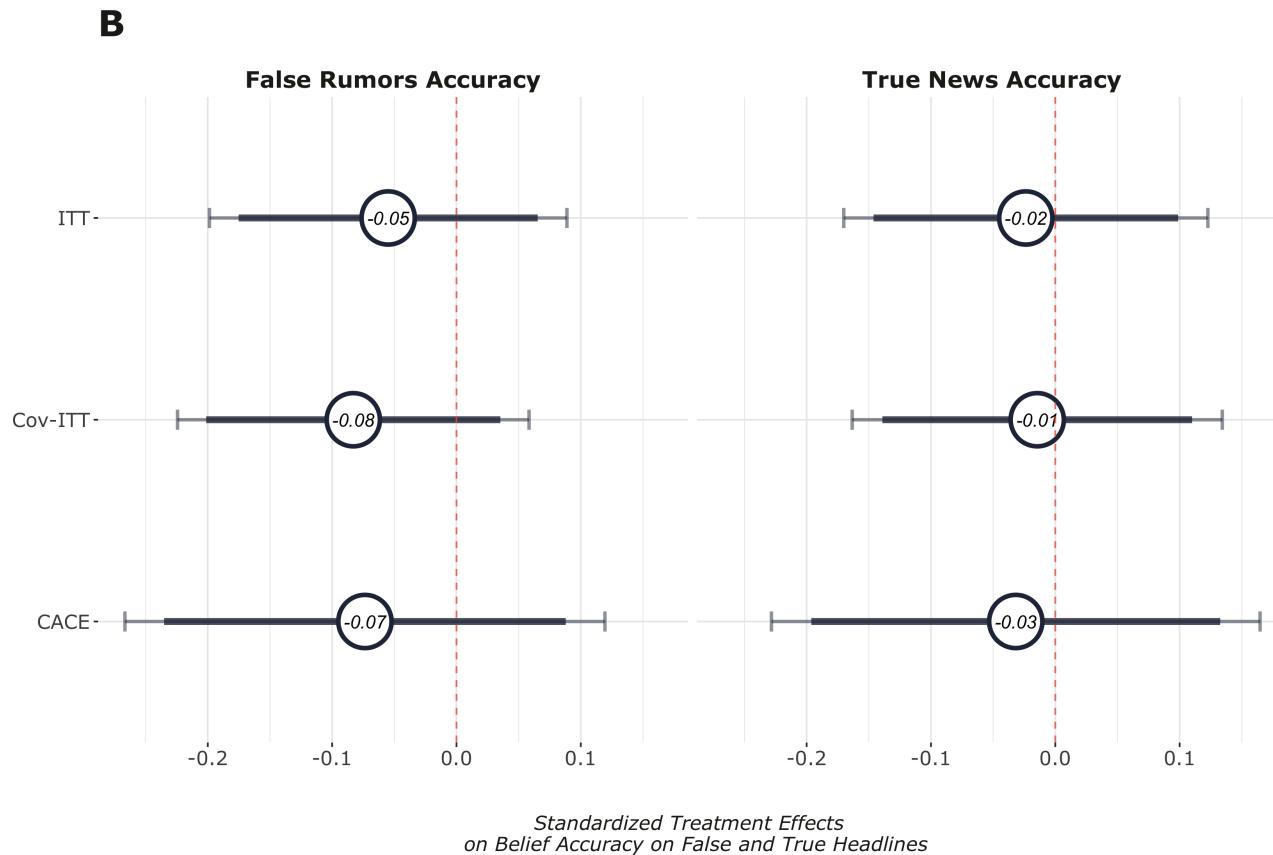
Effects on Exposure to Misinformation Rumors (H1)



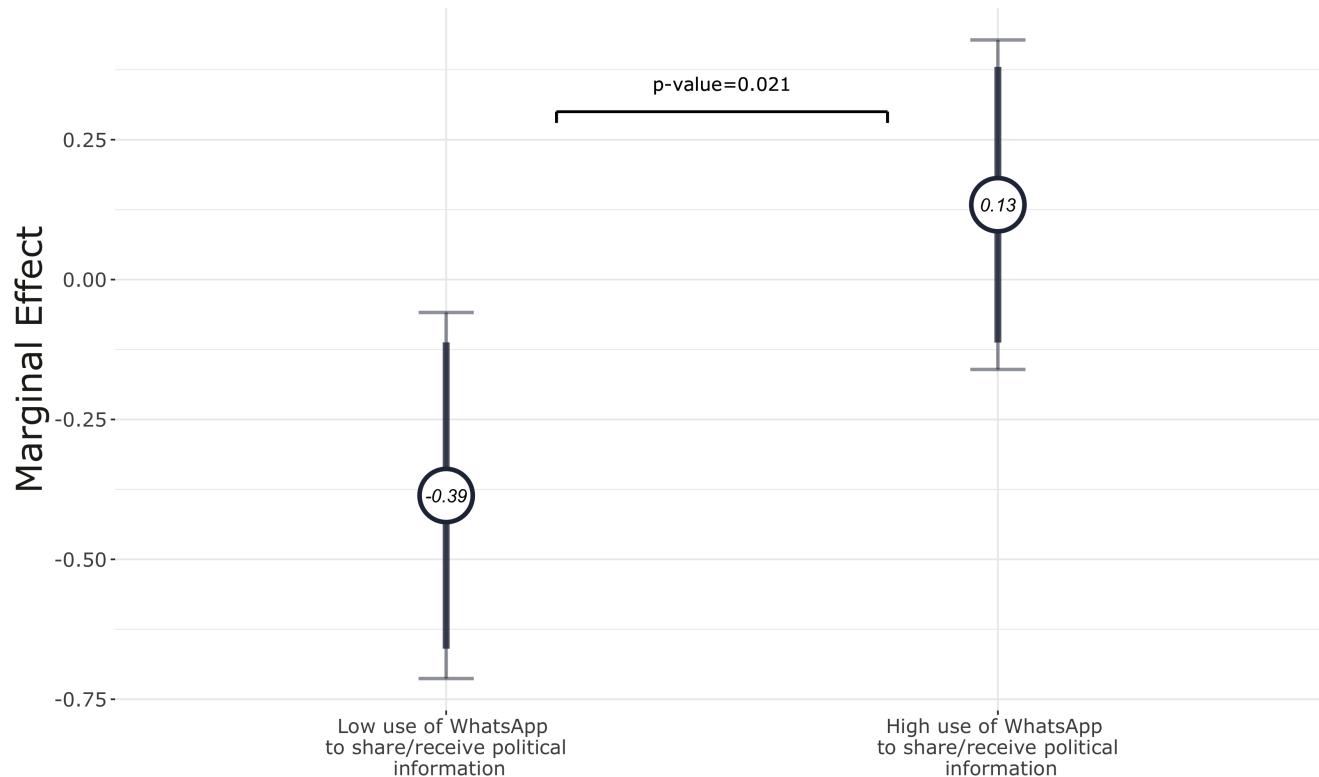
Reduction in exposure is large for false news (H1)



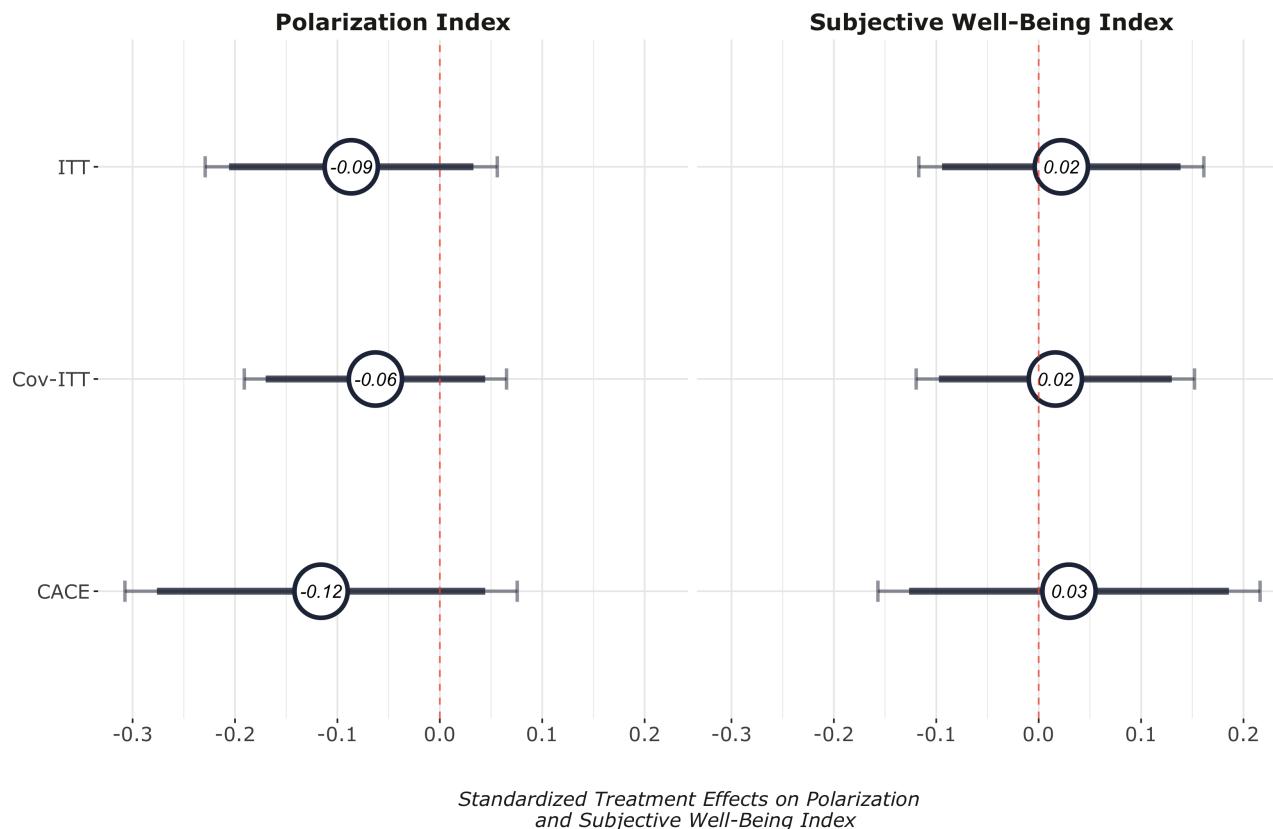
Effects on Belief Accuracy (H2)



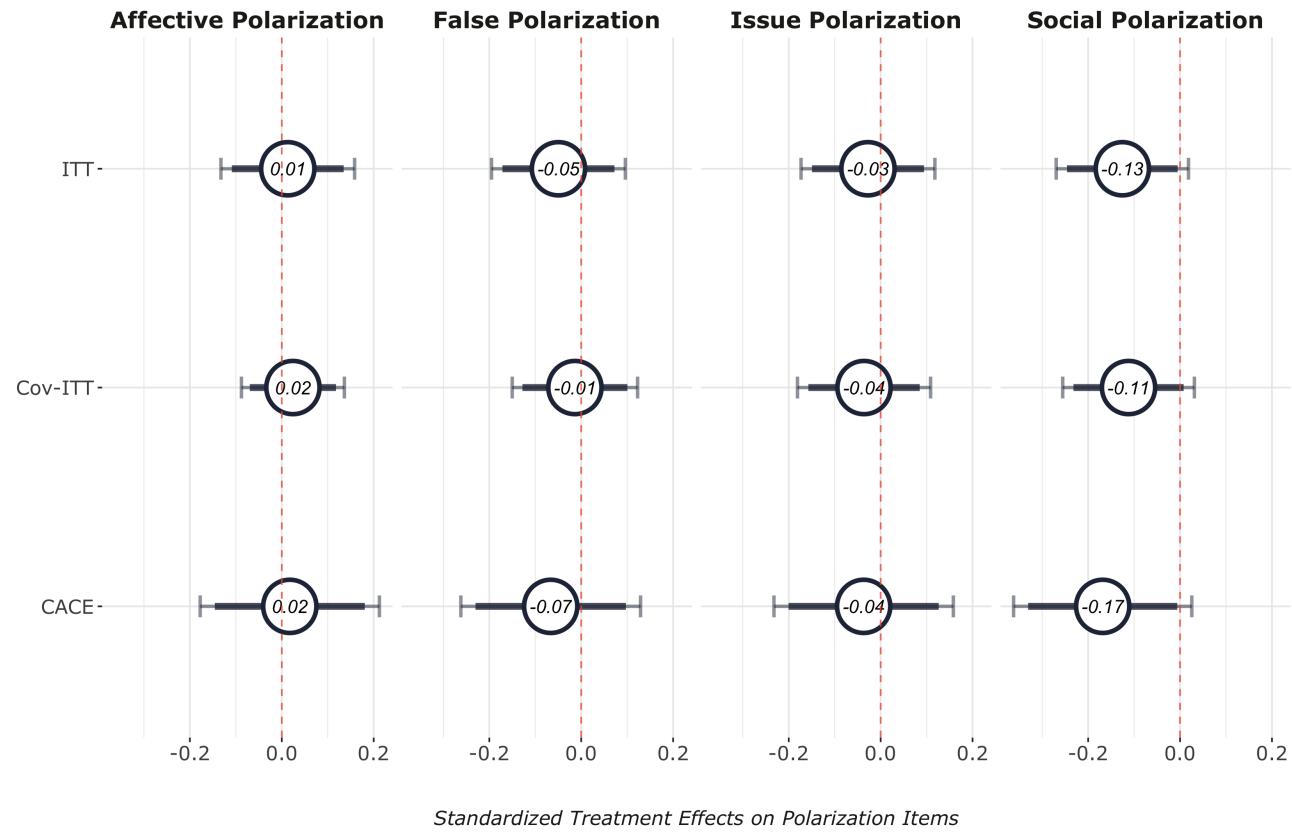
Belief Accuracy Conditional on WhatsApp usage for Politics



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



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 WhatsApp.
- Larger effect might exist exactly in hard to reach groups.
- Small effect size vs power

Next steps.

Replication, Replication, Replication

Thank you!

Examples of Misinformation Outcomes

False Item:

Only complete votes are counted by the electoral justice. If the voter only votes for the President, and votes blank for all the other races, the vote is considered a partial vote, and will be annulled

True Item:

After consecutive reductions, the current oil price in Brazil is below the global average value