



# Does Exposure to Online Misinformation Affect Beliefs? Evidence from a Deactivation Experiment on WhatsApp

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## *Disinformation Spreads on WhatsApp Ahead of Brazilian Election*

 Give this article  



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

Oct. 17, 2018



# Research Goal

Provide causal estimates for the effects of WhatsApp on exposure, beliefs for misinformation and downstream political attitudes

- ⊕ **Previous Deactivation studies:** full deactivation on Facebook, and mixed-results on effects on beliefs for misinformation and polarization (Asimovic et al., 2021; Allcott et al., 2020)
- ⊕ **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).

- ⊕ **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.

- ⊕ **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

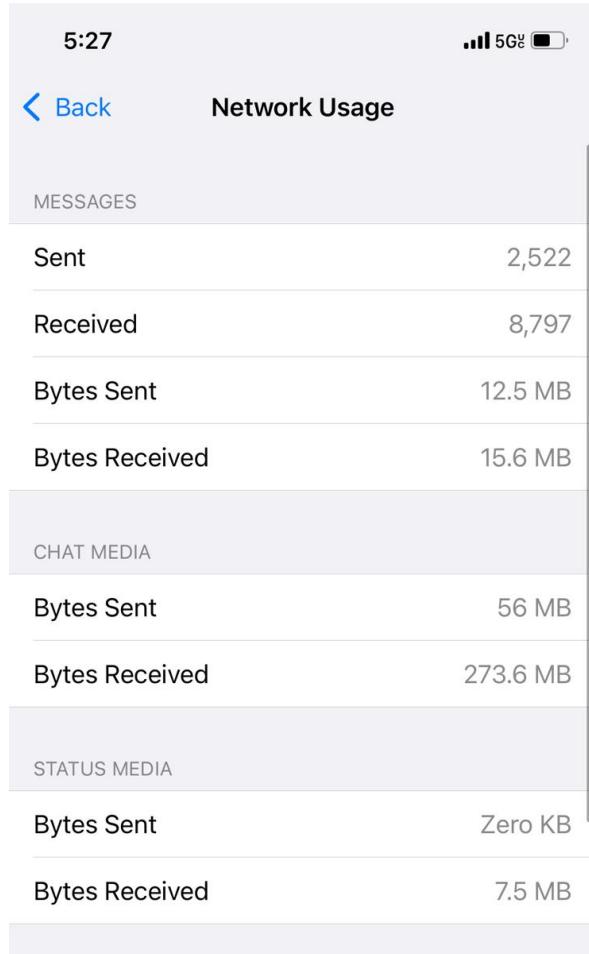
**Enrolled:** 773 respondents



# 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?').

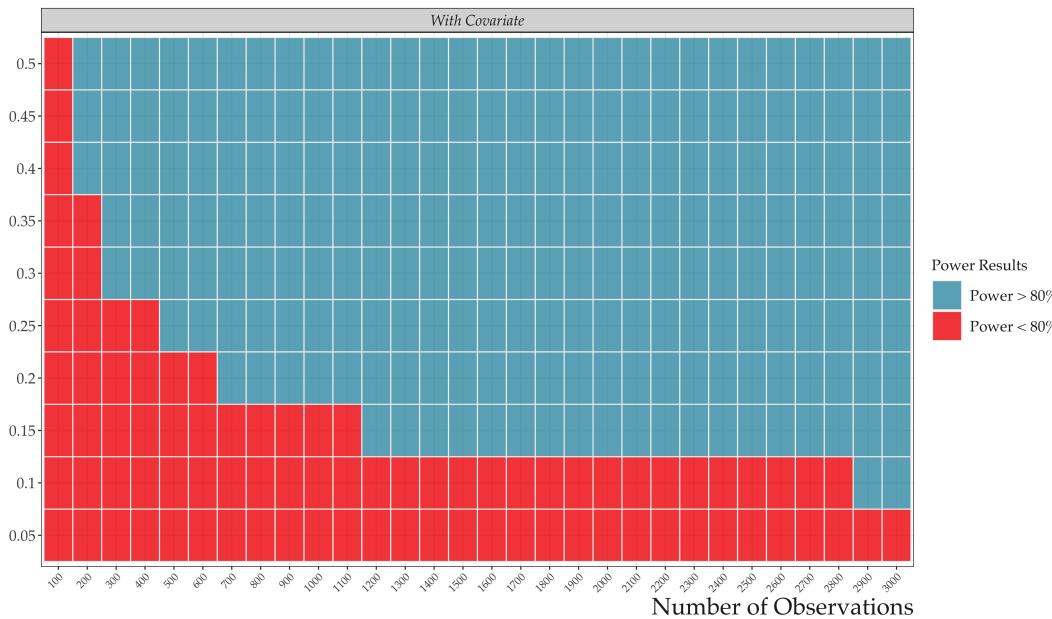
## **Subjective Well-being**

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

# Recruitment and Power Analysis

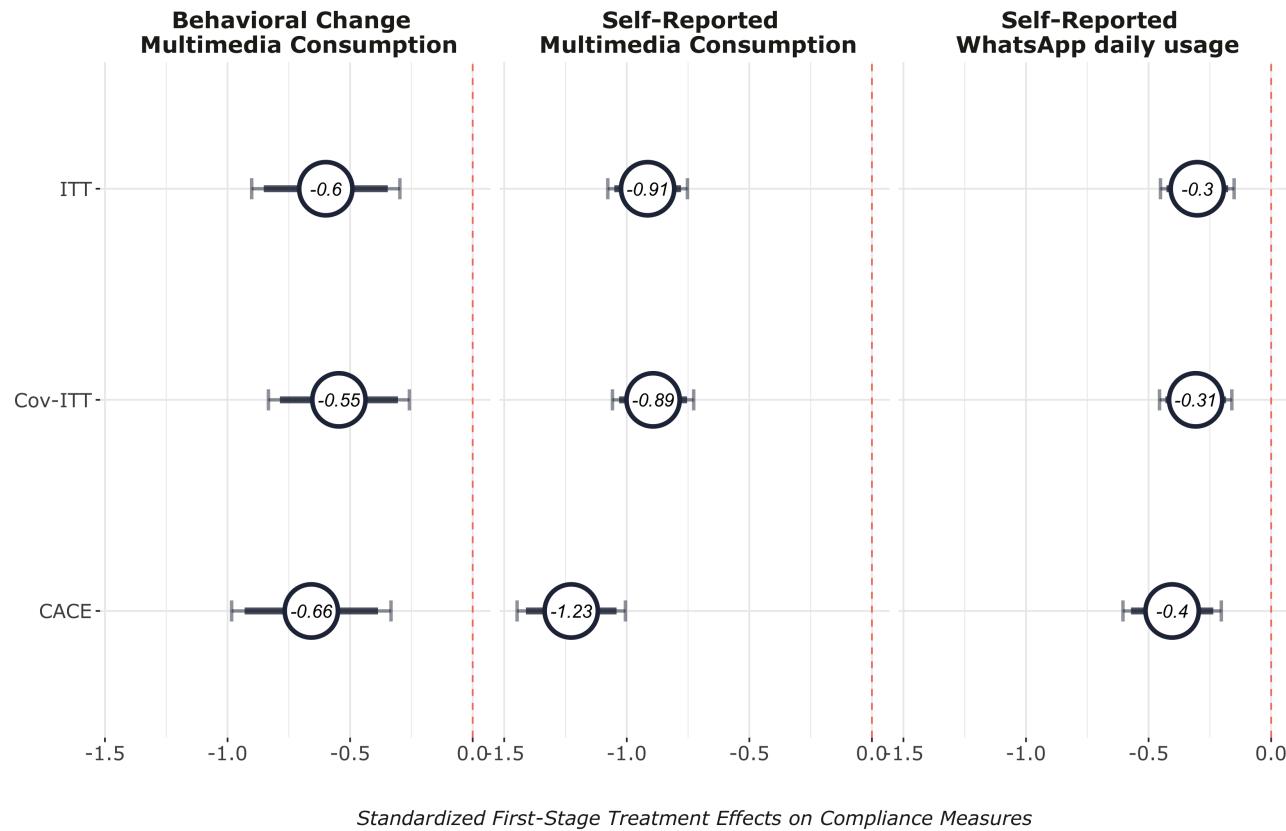
Complete Responses: 732.

Attrition Rate: 5.3%.

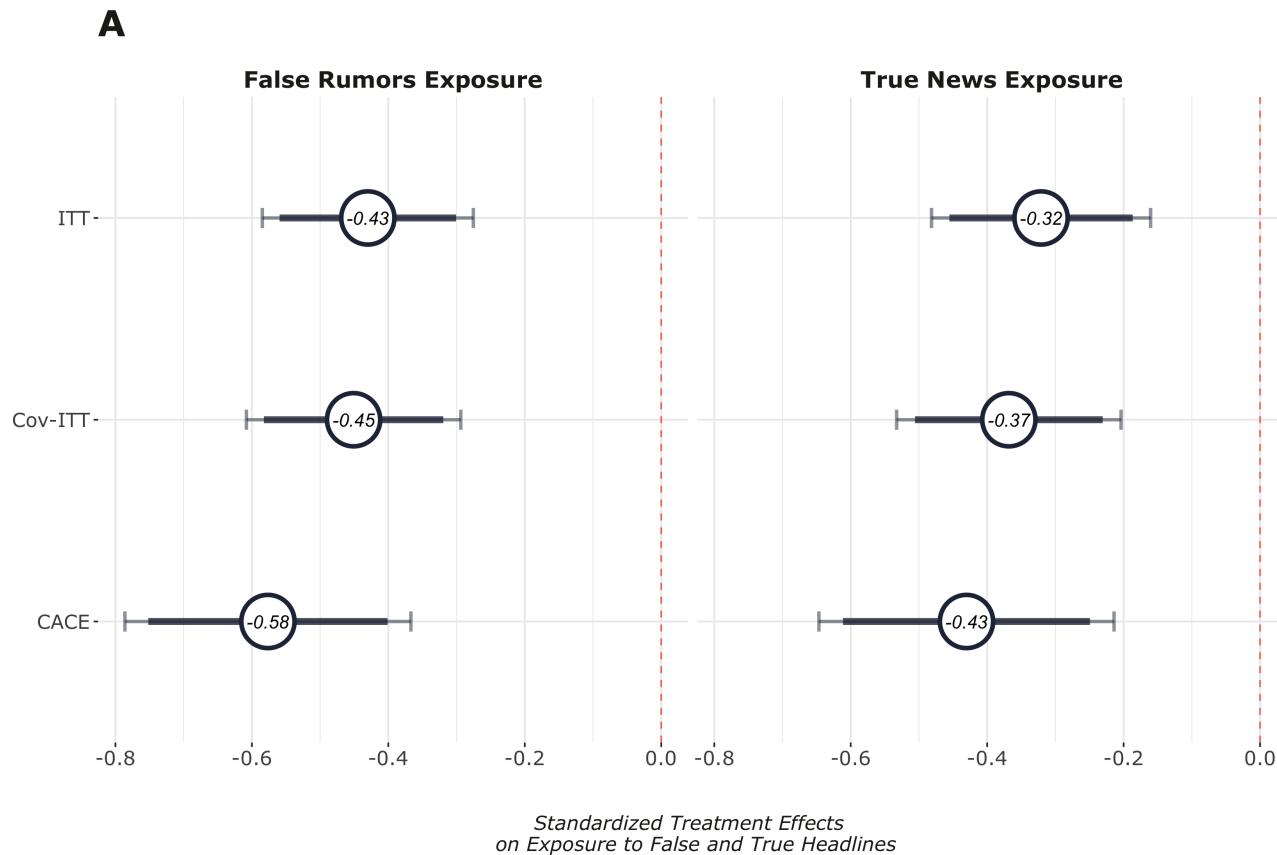


# Results

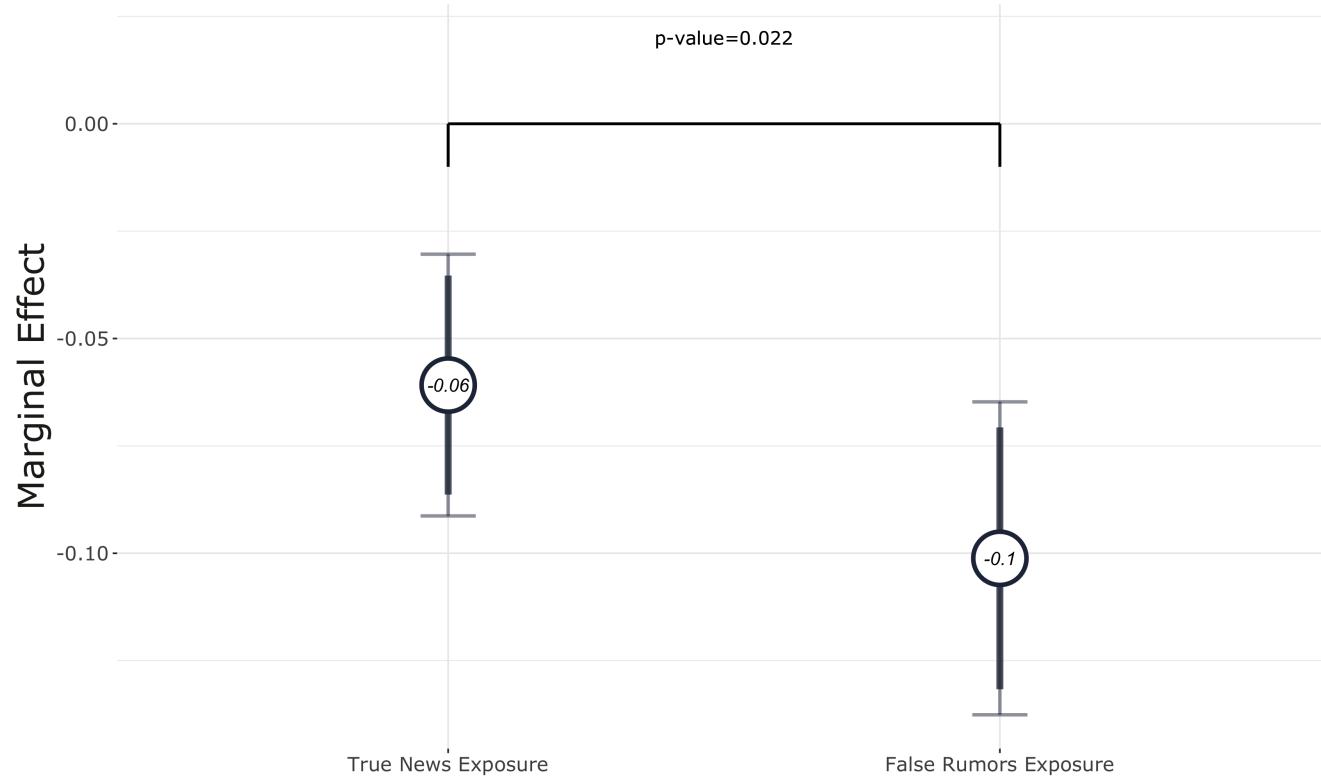
# First-Stage Results



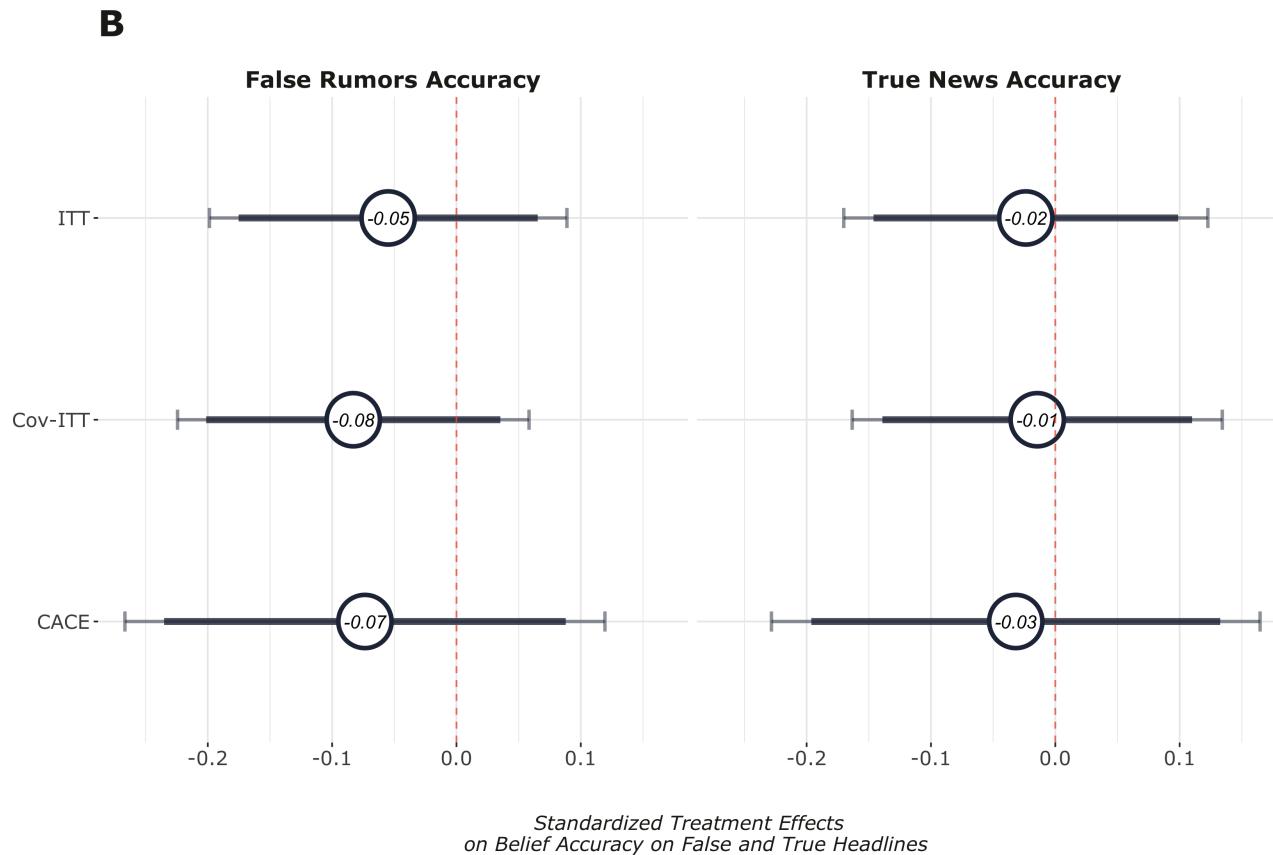
# Effects on Exposure to Misinformation Rumors (H1)



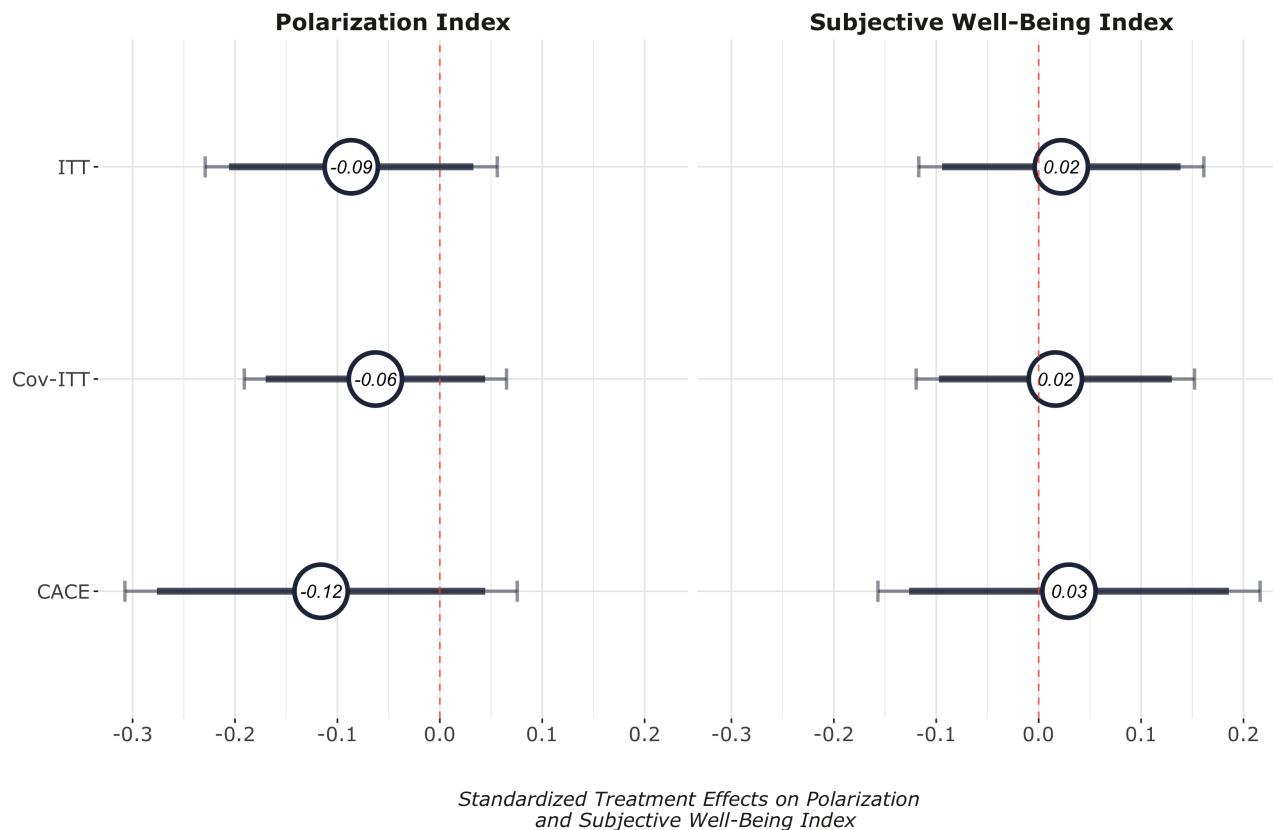
# Reduction in exposure is large for false news (H1)



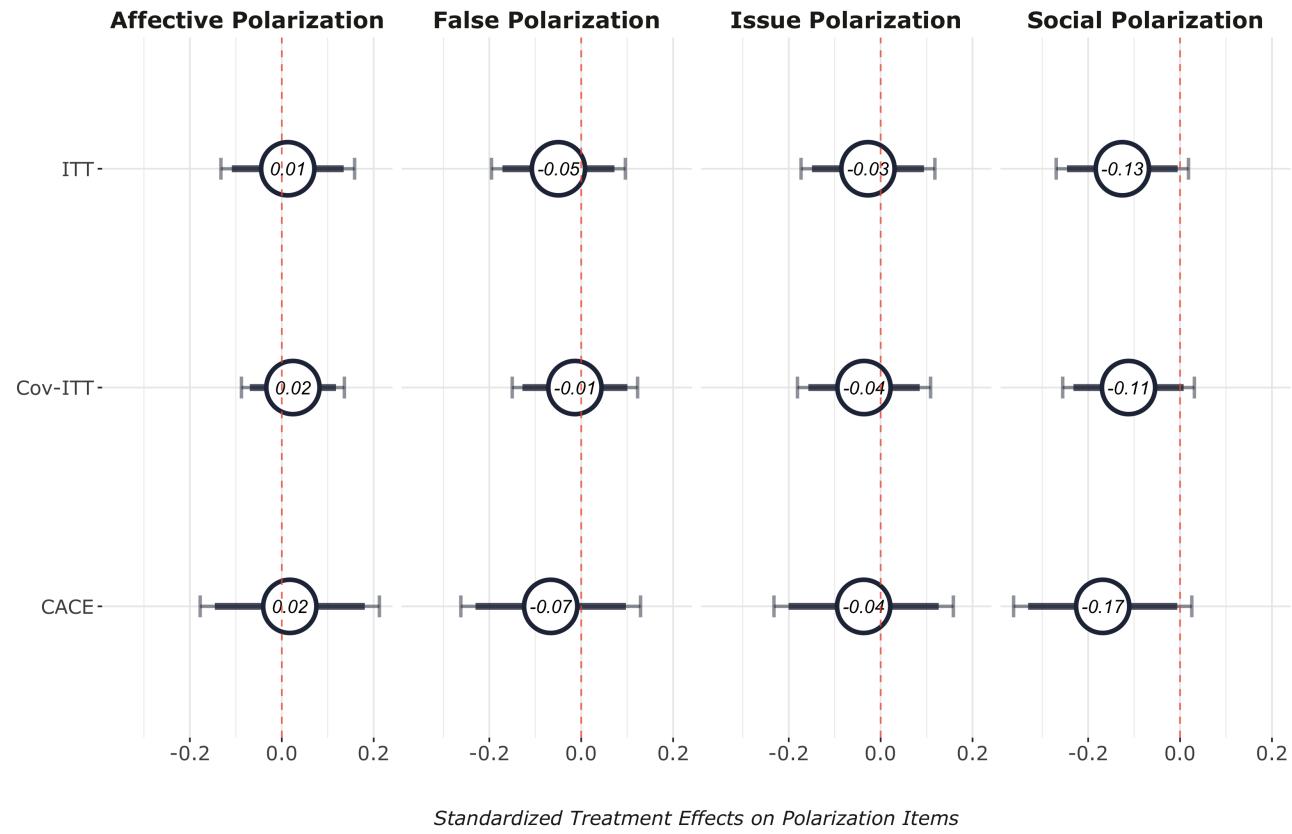
# Effects on Belief Accuracy (H2)



# 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

# Next steps.

## Multi-Country Extension: Mexico, South Africa and India.

- Contextual Diversity
- New Treatment Arm: overall reduction on WhatsApp usage.

# 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*