

# Can news media counter a disinformation campaign?

A case study of disinformation over the release of treated water from the Fukushima Daiichi power station

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## 1 Objective

This study investigates whether news media can effectively counter a disinformation campaign from the perspective of media studies. It uses media reports on disinformation against the release of treated water from the Fukushima Daiichi nuclear power plant in the summer of 2023 as a case study. It aims to answer two research questions:

- RQ1: What is the actual extent of disinformation about the release of the treated water?
- RQ2: What are the effects of news media reports of disinformation about the treated water on people's resistance to related disinformation?

## 2 Methods

This study adopted inoculation theory as its theoretical framework. The theory suggests that similar to vaccinating against a virus, people will become more resilient against disinformation if they are forewarned about the impending disinformation (Roozenbeek et al., 2022). Based on the theory, it is hypothesised that people will be more resistant to disinformation about the treated water if they are:

- H1: forewarned about an impending disinformation attack by news media
- H2: exposed to debunked versions of the disinformation by news media
- H3: informed about tropes used in the debunked disinformation by news media

## 3 Results

The hypotheses are examined quantitatively using structural equation modelling on survey data (n=1,034) collected in March 2024. First (RQ1), descriptive results show that the spread of disinformation about the treated water was limited. However, it could still mislead some people into believing it.

Second (RQ2), analytical results show that news media warnings of a disinformation attack could increase people's resistance to related disinformation (H1: supported). However, news media reports about debunked versions of the disinformation could have the opposite effect (H2: rejected) unless viewers were aware of the tropes used in the debunked disinformation (H3: supported).

## 4 Conclusion

The findings show that news media reports can potentially inoculate the public against a disinformation attack. However, further research on how to effectively deliver the warning messages is necessary.

## References

Roozenbeek, J. et al., (2022). Psychological inoculation improves resilience against misinformation on social media. *Science Advances*, 8(34), eabo6254. <https://doi.org/10.1126/sciadv.abo6254> ·