

Summer 2021

Mitigating Spillover Effects of a General Warning on Accuracy Judgements of True News Headlines

Delaney R. Todd
University of Puget Sound

Follow this and additional works at: https://soundideas.pugetsound.edu/summer_research

Recommended Citation

Todd, Delaney R., "Mitigating Spillover Effects of a General Warning on Accuracy Judgements of True News Headlines" (2021). *Summer Research*. 408.
https://soundideas.pugetsound.edu/summer_research/408

This Article is brought to you for free and open access by Sound Ideas. It has been accepted for inclusion in Summer Research by an authorized administrator of Sound Ideas. For more information, please contact soundideas@pugetsound.edu.

Abstract

The current study sought to analyze whether the inclusion of the generic source (e.g., *blog post*, *academic journal*, etc) of headlines posted on social media sites influenced people's accuracy judgments of true and false news headlines regarding the COVID-19 vaccine and whether that source information would help mitigate the previously demonstrated spillover effect that warning users of the potential for false news information on social media reduced people's accuracy ratings of both true and false news headlines. Participants completed questionnaires each containing 6 true and 6 false headlines. Half of the participants first saw a general warning as described above. Additionally, participants either did or did not receive source information for each headline. Three generic sources were used: Blog Post, Politically Affiliated National News Source, or Medical Journal. Participants were able to accurately distinguish between true and false headlines across all conditions and the presentation of a general warning significantly decreased accuracy judgments for both true and false headlines. Although the mere inclusion of headline sources did not significantly affect accuracy judgments as has been previously reported, source had a significant impact on participants' accuracy judgments such that headlines associated with Medical Journals were rated as significantly more accurate than headlines attributed to Blog Posts or Politically Affiliated National News Sources regardless of whether the headlines were true or false.

Introduction

As social media sites such as Facebook have become a common means through which false news information is circulated, strategies to minimize the effects of false news information have become increasingly necessary. Clayton et al. (2019) showed that presenting a general warning concerning the potential for false news information to be spread on social media may produce a spillover effect such that people's accuracy judgments are reduced for both true and false news headlines.

Heinbach, Ziegele & Quiring (2018) tested the effects of providing source information on people's accuracy judgments for true and false headlines and found that providing any source tended to increase peoples' accuracy rating for the headline. However, that study did not provide information about the generic nature of each source (e.g., blog post versus academic journal). Providing such information may enhance peoples' ability to assess the accuracy of headlines. This possibility was tested in the current study.

It is important for social media users to be encouraged to think critically about the news they receive; however, it is also important to consider how people's belief in true news information may be negatively impacted by general warnings.

Current Study

The current study had three primary aims:

- 1) To replicate the effect that participants who receive a general warning before rating the accuracy of headlines demonstrated lower accuracy ratings for *both* true and false headlines as compared to participants who received no warning.
- 2) To assess whether the inclusion of the general nature of headline sources (Blogpost, Politically Affiliated National News Source, or Medical Journal) could mitigate the spillover effect of a general warning on participants' accuracy ratings of true headlines.
- 3) To observe how the nature of each type of source (Blogpost, Medical Journal, or Politically Affiliated National News Source) impacted participants' ability to discern the accuracy of news headlines.

Materials and Methods

72 participants completed one of four 21-item surveys which included a mandatory consent form, instructions page, a general warning or a generic instruction graphic, a series of 12 headlines (6 true and 6 false) followed by a Likert scale ranging from 1 (Not at all Accurate) to 7 (Very Accurate), a demographic questionnaire, and a debriefing statement with a link to an optional 2-item raffle sign-up form.

A list of the headlines used can be accessed by scanning the QR code in the bottom right of this poster. In the conditions where source information was provided, each headline was attributed to one of the three types of sources; Blogpost, Politically Affiliated National News Source, or Medical Journal. Source was presented immediately under the headline as shown in Figure 1. Across participants, every headline occurred equally often in every condition. Graphics presented in the warning and no-warning conditions are shown in Figures 2 and 3.



The COVID-19 Vaccine is a Safe and Effective New Form of Gene Therapy
(Source: Medical Journal)

Figure 1. Example of headline with source provided.



How to recognize misleading articles
You will be asked to rate the accuracy of news headlines shared on social media. While some of the headlines may be true, others may be false and misleading. Some headlines use intentionally misleading tactics in order to persuade the public that they are true. In order to minimize the spread of misinformation, those who receive news from social media must remain skeptical of headlines and think critically about whether a headline may be misleading.

Figure 2. Example of general warning.



You will be asked to rate the accuracy of news headlines shared on social media.
Please read the following headlines and answer the corresponding questions.

Figure 3. Example of generic instruction graphic.

Results

Two three-way ANOVAs for mixed designs were conducted to assess whether participants were able to distinguish between true and false headlines, how being exposed to a general warning affected participants' accuracy judgments of true and false headlines, and how the inclusion of the general nature of headline sources affected participant's accuracy ratings of true and false headlines. Alpha level was set to 0.05 for all analyses.

The first analysis treated true/false as a within-subjects variable, and warning and source as between-subject variables each with two levels (warning/no warning; source/no source). Ratings for true headlines were significantly higher than for false headlines, $F(1, 70) = 221.53, p < 0.05$, and the presentation of a general warning significantly reduced accuracy ratings for *both* true and false headlines, $F(1, 70) = 4.88, p < 0.05$ (See Figure 4 below). The effect of including source on accuracy ratings did not approach significance, nor did any of the interactions.

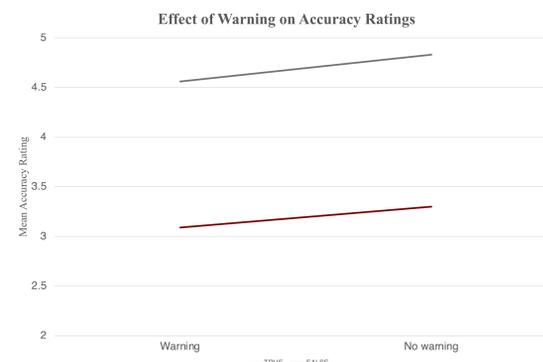


Figure 4. Mean ratings for true and false headlines with and without the presentation of a general warning.

The second ANOVA analyzed accuracy ratings of true and false headlines only for participants who received source information. This analysis treated source type as a within-subjects variable with three levels, and demonstrated that the type of source attributed to each headline had a significant effect on participants' accuracy judgments, $F(2, 36) = 5.814, p = 0.01$, regardless of whether the headline was true or false, such that headlines attributed to Medical Journals received significantly higher overall ratings ($M=4.35$) than headlines attributed to the presumably less reputable source types (Blog Posts and Politically Affiliated National News Sources; M_s for both = 3.75; see Figure 5 below).

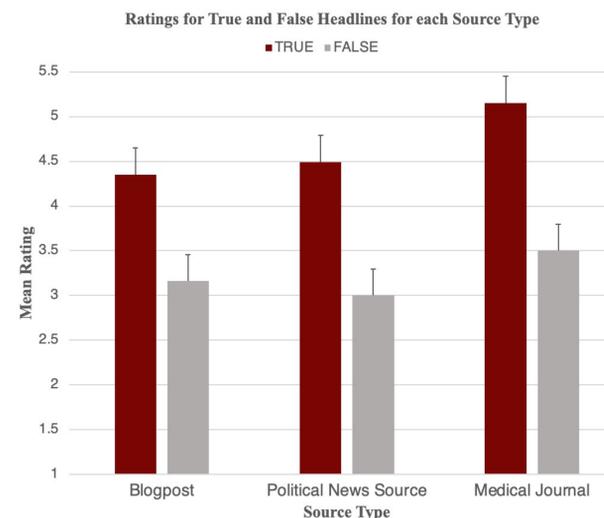


Figure 5. Mean ratings for true and false headlines for each source type. Error bars show the 95% within-subject confidence intervals (Loftus & Masson, 1994).

Discussion

The current study replicated the findings from Clayton et al. (2019) who demonstrated that average accuracy ratings for both true and false headlines decreased following the presentation of a general warning, indicating that warnings concerning the potential for false news on social media may reduce confidence in true news information.

We did not replicate the findings from Heinbach et al. (2018) who demonstrated that the mere inclusion of headline sources increased accuracy ratings overall. This may be because those authors did not systematically vary the nature of sources. In the current study, the type of source attributed to the headlines in the source conditions had a significant effect on participants' accuracy judgments independent of whether the headline was true or false, and headlines attributed to Medical Journals were viewed as more accurate than headlines attributed to Blog Posts or Politically Affiliated National News Sources.

The data did not yield evidence for an interaction effect between type of source and the true-false variable which indicates that the type of source attributed to each headline did not significantly improve participant's ability to distinguish between true from false news headlines, and participants gave higher ratings to headlines attributed to a Medical Journal regardless of whether the headlines were true or false.

The current findings imply that accuracy judgments of news headlines may be correlated with the type of source attributed to the headlines and its associated level of credibility, and that people may be more willing to view a headline as accurate when it is attributed to a credible source type.

Assuming that accuracy is correlated with source credibility, the results demonstrate the importance of including the generic nature of headline sources to mitigate the overall decrease in confidence towards headline accuracy associated with a general warning concerning the potential for false news information on social media.

Conclusions

Because the type of source had a significant effect on how accurate participants believed a headline to be, the inclusion of the general nature of a headline source may be a useful tool to help minimize the effects of false headlines.

Tagging headlines with both the exact source of the information as well as the general nature of the source may help people distinguish true from false news information if headlines associated with reputable sources tend to be true.

Future studies should seek to further explore strategies to help minimize people's belief in misleading news information while augmenting their perceived accuracy of true news information.

Acknowledgements

This study was supported by the University of Puget Sound's Summer Research Award in the Arts, Humanities and Social Sciences.

References

- Clayton, K., et al. (2019). Real Solutions for Fake News? Measuring the Effectiveness of General Warnings and Fact-Check Tags in Reducing Belief in False Stories on Social Media. *Polit Behav* 42, 1073–1095.
- Heinbach, D., Ziegele, M., & Quiring, O. (2018). Sleeper effect from below: Long-term effects of source credibility and user comments on the persuasiveness of news articles. *New Media & Society*, 20(12), 4765–4786.

Headlines and headline citations can be viewed by scanning the QR below:

