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Emotional Headlines and News Credibility

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Abstract. This study aimed to test how emotional headlines affect news credibility. It also tested the mental process behind this effect. An experiment was done with 201 participants. These respondents were randomly put into two different groups, named the high-emotion headline group and the low-emotion headline group. Each group was provided four different news headlines, and then the participants answered questions about manipulation, mental effort, and trust. The results show that emotional headlines did not significantly reduce readers' trust in the news. Perceived manipulativeness and cognitive load also did not have a significant difference between the two groups. These results suggest that the effect of emotional headlines on credibility may be more complex than previously assumed, and stronger manipulations or different measures may be needed to detect the proposed mechanism. The results illustrate that emotional headlines did not significantly decrease readers' trust in the news, $t(199) = 0.05$, $p = .963$, $d = 0.01$. The results add to existing studies: the connection between how the emotional news headlines are and whether people trust them is not as simple as past work thought or not.

Keywords: Emotional headlines, news credibility, between-subjects experiment

1. Introduction

These days, social media is the main way that people get news in their lives. Whether a news story gets many clicks or not often depends on whether its headline can catch a user's eye in the first three seconds. To catch this attention, more and more news outlets use exciting and sensational headlines, which are called "Emotionally Provocative Headlines." They do this with points, questions, strong words, and numbers that stand out. In the short run, this works well; emotional headlines increase the clicks and page views, which means they earn more money for the media. Is this strategy hurting news credibility? This question matters for the future of digital news and for a healthy public information environment; however, the research still needs real data to answer this question.

What people already know: studies have looked at how headlines affect what readers are thinking. In communication science, researchers show that the words in a headline decide how people judge the quality of a news story. The research shows that strong emotional language will change how people form opinions and whether they are persuaded. In the Chinese context, researchers have also begun to pay attention to the tension between sensational headlines and news credibility [1]. For example, a study found that although clickbait headlines can effectively stimulate emotional arousal and promote user participation, their misleading nature may damage news

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credibility. Another study analyzes the use of clickbait elements by news organizations on social media and their communication effects from the perspective of algorithm classification [2].

However, most of the above studies only focus on the direct relationship between title and trust. People still lack a full understanding of the reasons behind it. A recent experimental study found that emotional language actually reduces people's belief in fake news headlines, which the author explains as emotional language triggers "well-founded suspicion" rather than persuasion [3]. This finding suggests that the relationship between emotional headlines and trust may not be a simple "stronger emotion, lower trust" model, but involves more complex psychological mechanisms.

For example, do emotional headlines make readers feel uncomfortable, or just make their brains overwork, or both? The current research has not yet given a clear answer. This gap poses a problem because it hinders people from truly understanding the operating mechanism of trust in digital news and does not help the newsroom to write better titles.

2. Literature review

Two theories in psychology help to understand why emotional headlines may make people lose trust. The first is the theory of psychological inversion. According to this theory, individuals will resist attempts to control their attitudes or behaviors, which are manifested in reduced persuasion and decreased trust [4]. The theory points out that people do not like to be controlled by anything. When someone feels "someone is trying to control themselves," they will feel uncomfortable and become less willing to accept the information. In this case, when readers see an emotional headline, they may think that the news is trying to force them to click. When they feel this way, they will be more distrustful of the news and may even be more reluctant to click on the article. The second is cognitive load theory. The theory holds that the brain can only process limited information at a time. Cognitive load theory proposes that the capacity of working memory is limited. When the demand for information processing exceeds this capacity, understanding and judgment will become worse [5]. If the information is too difficult to understand or filled with too much gorgeous rhetoric, readers will feel tired and unable to think clearly. Emotional headlines are full of dramatic words and exaggerated expressions. Readers have to devote extra energy to finding the real facts. When the brain is tired, judgment will decline, and trust in the news will inevitably decrease.

Recent empirical studies that directly examine cognitive efforts in the process of news credibility judgment support this mechanism. Baum et al., who used pupil dilation as an indicator of cognitive effort, found that emotional headlines reduced the psychological effort invested in assessing the credibility of the source, resulting in smoother but less critical judgments [6]. Studies that directly measure the cognitive load in the process of news headline reading also support this view. Shi et al. used eye tracking to show that there are significant differences in readers' cognitive load when judging the authenticity of news headlines.

This shows that the linguistic features of the title do affect the readers' information processing burden, which may affect their judgment and trust [7]. On the contrary, these two mechanisms may form a chain path. Readers first feel manipulated, which makes them more skeptical. Subsequently, this causes the brain to work harder, eventually leading to a decline in its ability to think clearly, thereby reducing trust.

Based on the above discussion, this study proposes two main questions. RQ1: Do emotional headlines (strong vs. mild) really change readers' trust in news stories? RQ2: If yes, is this process achieved through the chain path of "sense of being manipulated → psychological effort → trust reduction"? In other words, does the emotional headline first make readers feel controlled, then make their brains tired, and finally reduce their trust?

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The research hypothesis is as follows. First, high emotional headlines will make readers trust the news less than low emotional headlines. Second, the sense of being manipulated will explain the association between emotional headlines and reduced trust. Third, mental effort will explain the association between emotional headlines and reduced trust. Finally, these two factors will form a chain path. Emotional headlines make readers feel manipulated, which in turn increases their psychological effort and ultimately leads to a decrease in trust in the news.

3. Method

The project used convenience sampling to recruit participants aged 18–30, with a mean age of 24. Recruitment was done through an online survey platform (Wenjuanxing) and in-person channels. The project received 201 valid questionnaires in total. Among the valid sample, 101 were in the high-emotion group, and 100 were in the low-emotion group.

The project used a one-factor, two-level between-subjects experimental design. The independent variable is headline emotionality (high emotion vs. low emotion). The dependent variable was news credibility. The mediating variables were perceived manipulativeness and cognitive load. The test also included gender, age, and news reading frequency as control variables.

The project chose four real news stories from a mainstream Chinese media platform, Sina Weibo, because they contain the issues that young people are most concerned about at present. The stories covered non-sensitive topics, like technology, education, environment, and health. For each story, the project wrote two versions: a high-emotion version and a low-emotion version. The facts in the content were exactly the same, only the headline wording differed.

For the high-emotion headlines, the project used typical features that make headlines more exciting, exclamation points or question marks, strong emotional words, numbers that stand out, and a point to the reader's personal interest. For the low-emotion headlines, the research used plain and factual statements with no exclamation points, no question marks, and no emotional modifiers in them.

The project conducted a pre-test to check if the manipulation worked. The pre-test used one item that asked participants if they thought these headlines were highly emotional, rated on a 7-point scale. The results showed that the high-emotion headlines have more emotional strength than the low-emotion ones.

3.1. Measures

Meyer developed and validated this five-item scale to measure newspaper credibility across five dimensions [8]. The measurement is based on 4 parts. The first one is Headline Emotionality (the independent variable). The research compares two kinds of headlines, high-emotion and low-emotion. High-emotion headlines are headlines that use strong emotional methods (exclamation marks, strong words, or big numbers). Low emotional headlines are plain and objective. The main points of the news are exactly the same, but the packaging is different. This helps researchers to observe the direct effect of emotional headlines, rather than the effect of the news story itself. Perceptual manipulation measures the extent to which readers feel "the title is trying to control" them. This concept comes from the theory of psychological inversion, that is, when people realize the purpose of the news, they will resist it. Cognitive load measures the readers' mental effort in processing the title. This concept is derived from the cognitive load theory, which states that the more difficult the information is to process, the more difficult it is to think clearly. This is the final result that this study wants to predict. This study adopts Meyer's five-dimensional definition: fair,

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unbiased, complete, accurate, and credible. The study also tracked gender, age, and frequency of news reading as control variables. This helps to ensure that the results are indeed derived from the title itself, rather than being influenced by these other factors. All measurements were measured using a 7-point Likert scale, with 1 = very disagree, 7 = very agree. The higher the score, the higher the level of the measured construct.

The perceptual maneuverability variable is measured by the items adapted from the psychological literature. An example question is: These titles try to control their feelings. The higher the score, the stronger the perceived manipulativeness.

The cognitive load variable was measured using an item adapted from the cognitive load study. An example item is: It takes a lot of mental effort to understand these titles. The higher the score, the heavier the cognitive load.

The news credibility variable is measured using Meyer's five-question scale, which covers five dimensions: fair, unbiased, complete, accurate, and credible. An example item is: People think these news reports are credible. The scale was originally developed and validated by Meyer as a comprehensive index to measure the credibility of newspapers, covering five dimensions [8]. The higher the score, the higher the credibility evaluation.

This study also included a manipulation test, which included an item: People think that these titles are indeed highly emotional. This item is used to confirm that participants have different perceptions of the title under the two conditions.

3.2. Procedure

All participants signed the informed consent form. The questionnaire is processed anonymously and does not collect any personally identifiable information to ensure the safety of participants. Participants completed the experiment online through the questionnaire star platform on WeChat. The system randomly assigns each interviewee to a high-emotion headline group or a low-emotion headline group. Each group of respondents read four different titles of the same version (all high-emotion or all low-emotion), presented one by one. After reading these titles, participants completed the measurement in the following fixed order: (1) Manipulation test items, (2) Perceptual Manipulation Scale, (3) Cognitive Load Scale, (4) News Credibility Scale, and (5) Demographic questions (gender, age, and news reading frequency). The whole experiment takes about 5 to 8 minutes to complete.

4. Results

Table 1. Descriptive statistics and hypothesis testing results

measure	high emotion M(sd)	low emotion M(sd)	t(df)	p	d
manipulation check (perceived emotionality)	4.44 (1.79)	3.70 (1.92)	0.11	0.913	0.02
perceived manipulativeness	5.05 (1.35)	5.05 (1.43)	0.71	0.476	0.10
cognitive load	5.14 (1.32)	5.15 (1.28)	0.20	0.481	0.03
news credibility	5.30 (1.15)	5.29 (1.07)	0.05	0.963	0.01

Note. All measures used a 7-point Likert scale (1 = strongly disagree, 7 = strongly agree). N = 201.

As shown in Table 1, the results are not significant when comparing the two groups. An independent-samples t-test was conducted with perceived emotionality as the dependent variable.

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The high-emotion group (M = 3.45, SD = 1.65) did not differ significantly from the low-emotion group (M = 3.42, SD = 1.65), t(199) = 0.11, p = .913, d = 0.02. The manipulation was not successful.

To answer the research question 1, an independent-samples t-test was conducted with news credibility as the dependent variable. As shown in Table 1, the high-emotion group (M = 5.30, SD = 1.15) did not differ significantly from the low-emotion group (M = 5.29, SD = 1.07), as p = .963, t(199) = 0.05, d = 0.01. Thus, the first hypothesis was not supported by the statistical result.

Additional t-tests were conducted for perceived manipulativeness and cognitive load. However, neither variable differed significantly between conditions, perceived manipulativeness, t(199) = 0.71, p = .476, d = 0.10; cognitive load, t(199) = 0.20, p = .841, d = 0.03. In this case, the proposed mediation and serial mediation models were therefore not tested, as the prerequisite condition, a significant effect of the independent variable on the mediator, was not met.

5. Discussion

This study tested whether emotional headlines affect news credibility. The results showed that emotional headlines did not significantly affect readers' credibility judgments. This suggests that headline emotionality may not be as important a factor in news credibility as previously assumed, at least among the population tested in this study.

There are several possible reasons why emotional headlines did not influence credibility judgments. First, readers may have become accustomed to emotional headlines in their daily media consumption and therefore no longer treat them as a signal of low credibility. Second, respondents may be aware that the headlines were exaggerated and adjusted their judgments accordingly, a phenomenon known as "justified skepticism". Third, the sample consisted of young adults aged 18 to 30, who are likely to be more familiar with clickbait-style headlines, therefore less affected by them. These explanations suggest that the role of emotion in news credibility may be smaller than the existing literature implies.

To examine whether gender, age, or news reading frequency will influence the results, a series of independent-samples t tests and one-way ANOVAs were conducted. None of these control variables had a significant effect on news credibility (all ps > .05). This suggests that the findings are not driven by demographic differences among readers.

Rony et al. found that correcting misleading headlines by removing emotional language improves credibility perception without reducing engagement [9]. Scacco and Muddiman found that overheated headlines reduce readers' perceptions of source credibility [10].

6. Conclusion

This study conducted an experiment to check how emotional headlines will affect news credibility, and to examine the psychological process behind this effect. An experiment was done with 201 participants aged between 18 and 30. They were randomly separated into a high-emotion headline group and a low-emotion headline group. Each group provided four news headlines and then answered questions about perceived manipulativeness, cognitive load, and trust.

The results show that the emotional headlines did not significantly affect the credibility of the news. This suggests that headline emotionality may not be a strong predictor of credibility judgments, at least in the context tested here. The null result is itself informative, as it challenges the assumption that emotional headlines necessarily undermine trust in digital news. Since neither

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perceived manipulativeness nor cognitive load differed between conditions, the proposed mediation and serial mediation models were not supported.

These results suggest that the links between these emotional headlines and news credibility may be more complicated than previously assumed. A possible explanation is that the manipulation is not strong enough to produce a noticeable difference in how the manipulation or mental load is felt. The other possibility is that respondents in the sample are relatively low sensitive to the headline emotionality, or the measure used is not sensitive enough to detect subtle differences. Based on the result, this study suggests that future research should check stronger manipulations, use more sensitive measures, and explore other potential mechanisms that may explain how emotional headlines affect trust in digital news. Overall, this study shows that emotional headlines may not always damage news credibility, and researchers should be careful about assuming a simple link between headline emotion and trust.

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