



Effect of Counter-Narratives and Credibility of Sources on Emotional Response: A Study of Instagram and WhatsApp Followers

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Abstract: In times of crisis, outbreaks, or pandemics, the dissemination of accurate information by the government becomes paramount. This study investigates the efficacy of governmental counter-narratives in addressing misinformation during the COVID-19 pandemic, specifically focussing on their impact on debunking various hoaxes. The study analyses the performance of the Jabar Saber Hoaks work unit, operated by the Regional Government of West Java Province, Indonesia. Through regression analysis, which encompasses multiple linear regression models and partial correlation hypothesis testing, the research surveyed 5,000 users of Instagram and WhatsApp. The findings reveal the success of the government's counternarrative initiatives in combating widespread hoax dissemination. These counternarratives significantly contributed to reinstating credibility, educating the populace, offering alternative viewpoints, sustaining interest, and demonstrating diverse messaging effectiveness. The study underscores the critical role of credible and timely counternarratives in addressing misinformation during crises. In addition, it emphasises its influence in rebuilding trust in official pandemic-related communications, promoting adherence to safety guidelines such as the 3M campaign, and mitigating vaccine hesitancy.

Keywords: Covid-19, Counter-Narrative, social media, Instagram, WhatsApp, Communication.

1. Introduction

When the COVID-19 outbreak escalated into a pandemic, many Americans were ensnared by hoaxes, leading them to view the World Health Organisation (WHO) March 2020 announcement as fraudulent (Stanley et al., 2021). Despite the consistent encouragement from the US government to adhere to health protocols, convincing the public to resist falling for hoaxes has become increasingly challenging. Hoaxes deliberately sow uncertainty to cause harm (Sellnow et al., 2009; Jahng, 2021).

Numerous countermeasures have been implemented, ranging from conventional strategies like campaigns and diverse message distributions to nonconventional tactics such as employing psychological reminders. The crucial inquiry persists: How can a counter-narrative be crafted to shield the public from disinformation and fake news, effectively influencing emotions and behaviours (Lewandowsky & van der Linden, 2021; Saltman et al., 2021)?

Developing narratives capable of countering hoaxes presents a formidable challenge. Within counternarratives, distinct actors weave concrete stories, each requiring a plot, context, and even dramatic elements that frame the story around characters portraying victims, villains, or heroes. Perhaps most crucial is the narrator, who steers the message ("actors back into focus") toward the intended goal. These narrative players may encompass "parliamentarians, parties, governments, officials, or other political elites" (McMahon & Kaiser, 2021). The objectives of counter-narrative activities are multifaceted (Martínez, 2017; Barrowcliffe, 2021). In governmental realms, counternarratives are indispensable. The credibility and character of the messenger significantly shape the government narrative (Iqbal et al., 2019).

In the governmental sphere, counternarratives are indispensable to combat the deluge of rampant hoaxes. In today's society, information exposure is extensive, with a substantial portion being non-factual. The impact of hoaxes on individuals' daily

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lives is substantial. Disinformation can skew people's beliefs (Sarithchandra & Haltinner, 2021) or influence beliefs on politicised issues (Park & Rim, 2019). Social networks act as a powerful tool to disseminate news and narratives during crises (Jung, 2021).

Platforms like WhatsApp serve as pivotal mediums for proliferating hoax narratives, manifesting as text, video, or audio clips (ranging from approximately 1 to 7 minutes) (Moreno-Castro et al., 2021). Given these circumstances, concerted efforts are imperative to curtail the dissemination of hoaxes, necessitating preventative measures to impede hoax consumption among social media users (Tchakounté et al., 2020; Ahmad et al., 2023). These actions aim to mitigate the symptoms of "mislabeled, fragmented, and conspiracy-driven" information, exerting control over various aspects of social media discourse (Chen et al., 2020).

Hence, hoaxes are not insurmountable forces but rather adversaries to be countered. Indeed, hoaxes do not solely impact the audience. Hence, efforts to debunk hoaxes are crucial, with the counter-narrative emerging as a potent tool to combat these falsehoods by exposing the lies within the message.

In the realm of politics, counter-narratives are crafted to debunk various hoaxes (Kaiser, 2021). These counter-narrative messages serve multiple purposes, from minimising acts of violence (Carthy & Sarma, 2021) to functioning as part of a Narrative Counter-Terror Strategy (McGregor, 2020) or rejecting stereotypes (Orlando, 2018). The diverse functions of counternarrative activities stem from their educational value (Miller et al., 2020) and the provision of alternative insights (Mordhorst, 2008). Such counternarratives employ a range of content styles, including humour, factual information, and logical reasoning (Ördén, 2018).

In light of these considerations, this research article seeks to gauge the efficacy of the West Java Saber Hoaks organisation's counternarrative in combatting hoaxes in West Java. The study aims to address several pivotal questions: What level of influence do counternarrative messages and the credibility of hoax sources exert on emotional responses? How does the interplay between counternarratives and emotional responses change when considering the variable of source credibility? Additionally, what impact does source credibility have on emotional responses when factoring in the counternarrative message variable? This research endeavours to examine the effects of counternarratives and the credibility of hoax sources on emotional responses, assess potential relationships between counternarratives and emotional responses while controlling for source credibility variables, and investigate the relationship between source credibility and emotional responses while controlling for counternarrative message variables.

2. Literature Review

2.1 Hoax and Counter-Narrative

Hoaxes represent a form of misinformation disseminated among information consumers. Their historical prevalence within the American press is evident in instances like the Penny Press period of the 1830s (Gorbach, 2018) and the Moon Hoax phenomenon in 1835 (Thornton, 2000). Several studies have been conducted to educate individuals about exercising caution and diligence in both receiving and sharing information (Lowe, 2012). It's imperative to learn techniques to avoid falling prey to misleading messages and to cultivate responsible social media usage (Ahmed et al., 2021). Additionally, understanding how to identify Twitter rumours, discern clickbait, acknowledge the impact of influencers and verified accounts (such as celebrities and brands) on hoax propagation, and develop fact-checking tools through platforms like FatRank are crucial (Mejova et al., 2021).

Hoaxes are inherently intertwined with ethical concerns, often motivated by various agendas aimed at inciting hatred or excitement (Fleming & O'Carroll, 2010). Consequently, the need for counternarrative initiatives becomes apparent to elucidate the pervasive nature of hoax narratives dominating public discourse. Counter-narrative messages offer fresh interpretations and conclusions concerning the prevalence of hoax-related topics (Dionisopoulos, 2009).

Counter-narrative studies are inherently relational, consistently interlinked with the meanings embedded in other narratives and stories. These studies are interdisciplinary, drawing from fields such as history, culture, and others, encompassing various mediums such as social media, digital stories, photographs, and literature. Within an organisational framework, counternarratives establish a binary relationship with the master narrative, relying on interpretations and retellings that are either controlled, suppressed, or silenced, reflecting interconnected networks of time and relationships within the storytelling framework (Boje & Lundholt, 2018).

2.2 The Counternarrative as a Theoretical Concept

Counter-narratives possess the transformative potential to challenge dominant narratives, encompassing topics of struggle or the representation of individuals and groups (Lueg & Lundholt, 2021). Michael Bamberg and Zachary Wipff (as cited in Lueg & Lundholt, 2021: 70) have examined conflicting narratives vying for control within the public sphere, contributing to the emergence and dominance of various groupings. To counter these narratives, movements utilise succinct, empirical, and interactive stories, necessitating a similar approach from counternarratives. These counternarratives aim to convey information with factual coherence while presenting a different storyline, reinterpreting events and occurrences. The information of online media exhibits distinctive characteristics, characterised by its nature, heterogeneity, and diverse data composition (Poorisat et al., 2019).

2.3 Message Intensity

This study investigates the impact of information dissemination, assessing it through the intensity of the message, which encompasses both the frequency of the counter-narrative (George et al., 2021) and its duration (S. H. Kim et al., 2014). The frequency of impressions measures the volume of message dissemination, serving as a predictive indicator for the existence and intensity of the message's meaning. On the other hand, the duration of an impression delineates how message exposure is assimilated within a specific model, encompassing aspects such as speed, perspective, and volume of data received within a given message unit.

2.4 Counternarrative Message

Effective information messages encompass a spectrum of elements, such as sound and visual effects, verbal and non-verbal cues, language, colours, characters, and character figures, essential to capturing the audience's attention (Soemanagara, 2006:106-122). The credibility of communicators is a key aspect of message delivery. Credible communicators are characterised by expertise (intelligence, capability, and knowledge), trustworthiness (honesty, sincerity, and moral integrity), and attractiveness, which includes physical appeal.

In this research, an array of measurement tools is employed to assess various facets of counternarrative messages. These measurements encompass:

- Clarity of counter-narrative messages (Abunyewah et al., 2020; Stephen, 2018)
- Clarity of counternarrative vocabulary (van Engen et al., 2012; Scarborough & Zellou, 2013)
- Voice intonation in counter-narratives (Levis, 1999) (Domínguez, 2013; Gélinas-Chebat et al., 1996)
- Completeness of messages containing data and facts in counter-narratives (Poorisat et al., 2019) and Message Completeness (Poorisat et al., 2019)
- Ease of understanding of the language used in counter-narratives (Rönnerberg et al., 2013; GREEN, 2010)
- Ease of understanding the vocabulary used in counternarratives (Lockwood et al., 2019; Zdrzilova et al., 2018)
- Voice appeal in counter-narratives (Zuckerman & Driver, 1989) (Hughes et al., 2010)
- The attractiveness of verbal language used in counter-narratives (Ifantidou, 2021; Jain et al., 2019)
- Attractiveness of non-verbal language, such as facial expressions, body movements, and postures, used in counter-narratives (E.Riggio & Woll, 1984; Hess, 2016)
- Message appeal, incorporating words that evoke emotions, is utilised in counternarratives (Lang & Yeghyan, 2008; Teichert et al., 2018; Stephen, 2018).

2.5 Message Source Credibility

The credibility of the communication process itself is crucial for effective message delivery. This research assesses credibility by evaluating the credibility of the source of the message. According to Berlo et al. (2021), credibility of the message source can be evaluated across three dimensions: safety (safe-unsafe; just-unjust; kind-cruel; friendly-unfriendly; honest-dishonest), qualification (trained-untrained; experienced-inexperienced; skilled-unskilled; qualified-unqualified; informed-uninformed), and dynamism (aggressive-meek; empathic-hesitant; bold-timid; active-passive; energetic-tired).

Numerous studies have explored source credibility's relationship with message effects, marking significant developments in this field. With the evolution of information dissemination on the Internet, perceptions of message credibility have undergone substantial changes (Rubin et al., 2009). Some studies investigating source credibility include: examining the credibility of message makers within influencer marketing (Belanche et al., 2021), exploring source credibility across dimensions of attractiveness, trustworthiness, and expertise (Weismueller et al., 2020); investigating characteristics of credibility in communication sources (eWOM) and its impact on consumer behaviour (Ismagilova et al., 2020); evaluating source credibility specifically focussing on competence (Kim & Song, 2020); analysing source credibility in the context of fake news messages (Visentin et al., 2019); and exploring methodologies for measuring credibility in advertising, brand, and corporate realms (Hussain et al., 2020).

2.6 Emotional Response

Public responses to received information cover various aspects, with emotional response being a significant component. Several studies have delved into this area, examining diverse aspects, including:

Effects of Emotional Tone and Arousal of Viral Messages on Social Media (Borges-Tiago et al., 2019), Emotional Sentiments in Tweet Messages (Bashir et al., 2021), Psychological Principles of Responding to Fake News (Lewandowsky et al., 2017), the role of emotions in “vaccine” communication efforts (Chou & Budenz, 2020), Effects of emotion (depression) on people exposed to COVID-19 messages (Torales et al., 2022), Effects

of Emotions (Crowding) in Marketing Messages During the COVID-19 Pandemic (Eroglu et al., 2022), and Effects of Emotions on the Rhetorical Message of Tweets (US President Donald Trump's rhetoric against Russia) (Afanasyev et al., 2021).

The assessment of emotional response often involves measuring ten specific nouns: optimism, confidence, enthusiasm, excitement, security, fear, boredom, patriotism, anxiety, and anger. Each noun is rated on a three-point scale, gauging an individual's feelings after exposure to political candidate advertisements. Tedesco (2002:40) conducted research employing this scale, assessing its reliability using Cronbach Alpha with indices of 0.70 and 0.72. Tedesco's study significantly contributes to understanding emotional and image responses evoked by political advertising.

3. Methodology

This research aims to assess the effectiveness of counter-narrative messages based on two primary dimensions: message content and source credibility. The analysis focuses on the impact of message content, encompassing frequency, appeal to verbal and nonverbal language, voice appeal, and emotional triggers, along with the influence of source credibility elements—safety, qualification, and dynamism—on audience emotional responses.

To conduct this evaluation, a regression model was employed, specifically utilizing a multiple linear regression model. The selection of the most relevant predictor was determined through criteria such as the Bayesian information criterion, F-statistic, or stepwise procedure. Both the enter method and stepwise method in multiple regression were employed in this study.

The research population comprised 5,000 active followers on Instagram and WhatsApp affiliated with Jabar Saber Hoaks, a division within the Communication and Information Agency of the West Java Regional Government, Indonesia. The sample size was determined using criteria specific to multiple regression and selected through a random number table. Over a period of 2.5 months, G-form questionnaires were distributed to various Instagram and WhatsApp accounts, randomly chosen from the selected pool.

Data analysis involved the utilization of Multiple Linear Regression and Partial Correlation techniques through the SPSS v.21 data processor. For validity testing, the Pearson r formula was applied, involving three coefficients, and the reliability assessment encompassed three variables: X (political advertising), Y (emotional response), and Z (candidate image).

3.1 Operations of Variables

H1: *There is an effect of the counternarrative message (X1) and the credibility of the message source (X2) on the emotional response (Y).*

H1a: *There is a relationship between the counter-narrative message (X1) on the emotional response (Y) by controlling the source credibility variable (X2)*

H1b: *There is a relationship between the credibility of the message source (X2) on emotional response (Y) by controlling the counter-narrative messages (X1).*

X1 (Jabar Saber Hoaks' counter-narrative message) incorporates the intensity and content of counter-narrative messages. The intensity measurement involves assessing the frequency of viewership and viewing duration of these messages. Meanwhile, the content aspects of counter-narrative messages evaluated include message clarity, vocabulary clarity, voice intonation, completeness of factual information, language and vocabulary comprehension, voice attractiveness, appeal of verbal and nonverbal cues (such as facial expressions, body movements, and postures), and emotional appeals using impactful words. Measurement of X1 (Counter-Narrative Message) employs a Likert scale ranging from 1 to 5.

X2 (Credibility of the Source) is comprised of Convenience, Qualification, and dynamism factors. Determining the value for the "Credibility of the Source" uses a differential semantic scale ranging from 1 to 7.

Variable Y (Emotional Response) encompasses dimensions such as optimism, certainty, anxiety, passion, security, fear, boredom, concern, and anger. Measurement of the "Emotional Response" variable also utilises a differential semantic scale with a range of 1 to 7.

3.2 Population and Samples

Jabar Saber Hoaks, a department within the West Java Government Communication and Information Service, was established on December 7, 2018. Its role encompasses fact-checking materials or rumours found in online media, verifying their authenticity, and promoting public awareness about digital literacy.

The research population comprises 5,000 active followers of the Jabar Saber Hoaks account, who are members of Instagram and WhatsApp under Jabar Saber Hoaks. The count of followers on Instagram amounted to 3,154 (63.08%), while on WhatsApp, there were 1,846 (36.92%). Each Instagram follower is assigned a number from 1 to 3154, and each WhatsApp follower is assigned a serial number ranging from 1 to 1846.

The sample size was determined using a multiple regression sample size calculator, considering the criteria outlined by Soper DS (Multiple Regression Sample Size Calculator, Online Software, 2022), Abramowitz M, Stegun IA (1964), and Cohen J, Cohen P, West SG, Aiken LS (2013): "Such as effect size: 0.05, p-value 0.05, Predictor variables 2, and Statistical power 0.9. After the calculation, we obtained a minimum sample size of 264 respondents.

A questionnaire was also distributed via WhatsApp and Instagram. The first wave included 150 respondents, and the second wave included 114 respondents. A random number generator was also used to select 264 respondents, which included 167 Instagram followers and 97 WhatsApp followers. A questionnaire was also distributed to the participants via WhatsApp and Instagram messaging apps. The sample size for the first wave was 150 people, and the sample size for the second wave was 114 people. Furthermore, 264 respondents were chosen at random using a random number generator, including 167 Instagram followers and 97 WhatsApp followers. These respondents were drawn from the fan bases of the respective platforms.

The questionnaire was in the form of a G form and was distributed to the Instagram response accounts and to the WhatsApp respondents via direct message. The respondents were randomly chosen from active Instagram and WA follower accounts using a random number table. The dissemination and data collection took 2.5 months.

This study had 283 participants, with 209 men (73.85%) and 74 women (26.14%). The respondents ranged in age from 17 to 18 years (2.8 percent), 19 to 20 years (6%) and over 20 years (91.1%). Meanwhile, 52.65% of Instagram respondents were male, while 20.14% were female. 21.20% of the WhatsApp respondents were male, while 6.01% were female.

4. Data Analysis Techniques

To address the challenges associated with multiple linear regression and partial correlation, this study examines the predictive capacity of the model and the significance of selected variables by evaluating and comparing the outcomes of both methodologies. Furthermore, the study controls for the influential factors and general variables that affect messages in emotional responses (variable Y).

Multiple Linear Regression: This analysis involves a regression model with one dependent variable and two or more independent variables.

Partial correlation: The study employs the Partial Correlation Formula described by Healey (2010: 365). Data processing was performed with SPSS v.21 software.

Validity and Reliability Testing: The validity of the questionnaire was assessed using Pearson's r formula, relating each assessment of the element with the total rating of the element. With three variables—X (political advertising), Y (emotional response), and Z (candidate image)—the study utilized three validity and reliability coefficients. For items with interval or essay data, reliability testing employed the Spearman-Brown (Sugiyono, 2007: 359) and Cronbach Alpha formulas (Sugiyono, 2007: 365). SPSS v.21 software was utilized to test the validity and reliability of the questionnaire based on the Pearson correlation coefficient formula described by Champion (1981: 335).

5. Results and Discussion

Table 1: Variable X1: Jabar Saber Hoaks' counter-narrative message.

X1.1: Intensity of the counter-narrative message:	X1.1.1 frequency = 54,417% often view shows
	X1.1.2 duration = 75,618% watch for quite a long time
X1.2: Counternarrative message	X1.2.1. Message Clarity = 83,746 % clear message in the counter-narrative
	X1.2.2. Clarity of Vocabulary = 84,099% clear vocabulary in the counter-narrative
	X1.2.3. Voice intonation = 76,679 % good intonation in counternarrative
	X1.2.4. Completeness of messages containing data and facts = 75,165% complete contents of the counternarrative message
	X1.2.5. Ease of understanding the language used = 81, 272% easy to understand the language used in the counter-narrative
	X1.2.6. Ease of understanding the vocabulary used = 80,919% easy to understand the vocabulary used in the counter-narrative
	X1.2.7. Attraction of the voice = 61,484% interesting voice in the counter-narrative
	X1.2.8. The appeal of verbal language = 62,897 % Interesting verbal language in the counter-narrative
	X1.2.9. The appeal of non-verbal language in the form of facial expressions, body movements, and body postures = 59,717 % Interesting non-verbal language in the counter-narrative
	X1.2.10. Message appeals in the form of words that touch emotions = 47.704% The counternarrative elicits an emotional response

Source: Author Processing

Table 2: Variable X2: Source Credibility.

X2.1. Convenience factors =	The counter message source has a high level of friendliness (81,978 %),
	The counter-message source has a high level of security (72,799%),
	The counter message source had a high friendship rate (86,926%),
	The counter-message source had a high degree of fairness (81,959%),
	The counter-message source had a high level of honesty (82,839)
X2.2. Qualification Factors =	The counter message source had a high level of training (81,978%),
	The counter-message source had a high level of experience (85,159%),
	The counter-message source had a high level of qualification (85,866%),
	The counter message source had a high level of skill (87,279%),
	The counter message
X2.3. Dynamism Factors =	The counter-message source showed a moderate level of aggressiveness (64,664%),
	The counter-message source showed a high level of assertiveness (80,919%),
	The counter-message source showed a high level of courage (81,272%),
	The counter-message source showed a high level of activity (80, 212%),
	The counter message source showed a high level of energy (80, 211%).

Source: Author Processing

Table 3: Variable Y: Emotional Response

Optimism	= Instagram and Whatsapp followers gave a high response to optimism (87,632%)
Certainty	= Instagram and Whatsapp followers gave a high confidence response (86,582%)
Anxiety	= Instagram and Whatsapp followers gave a low response to anxiety (83,392%)
Passion	= Instagram and Whatsapp followers gave a high response to passion (80,565%).
Security	= Instagram and WhatsApp followers gave a high response to the sense of security (83,392%)
Fear	= Instagram and Whatsapp followers gave a low response to fear (80,918%)
Boredom	= Instagram and Whatsapp followers gave a low response to boredom (79,505%)
Concern	= Instagram and Whatsapp followers gave a high response for the level of concern (79,505%)
Anger	= Instagram and Whatsapp followers gave a low response to anger (78,092%)

Source: Author Processing.

6. Multiple Regression and Partial Correlation Analysis

6.1 Multiple Regression Analysis

H1: *There is an effect of the counternarrative message (X1) and the credibility of the message source (X2) on the emotional response (Y).*

Within this study, an extensive array of statistical analyses was executed to examine various aspects of the collected data. The normality test, facilitated through the Kolmogorov-Smirnov test, yielded a significance value of 0.106. As this value exceeds the customary threshold of 0.05, the data is reasonably considered to adhere to a normal distribution. Furthermore, an examination of the normal P-P regression standardised residual graph plot (P-P Plot) for diagonal sources revealed that data points are uniformly dispersed around and closely follow the diagonal line, signalling the normal distribution of residual values.

Concurrently, the heteroskedasticity test used the scatter plot method by plotting the ZPRED value (predicted value) against the SRESID (residual value). No discernible pattern, such as clustering in the middle with subsequent narrowing or widening, emerged in the graph, suggesting the absence of heteroskedasticity.

Regarding the Linearity Test: Linearity test VAR_Y1_response_emosional * VAR_X1: The significance value obtained for the deviation from linearity is 0.202. Given its surpassing of the conventional threshold of 0.05, it implies a robust linear relationship between the variable X1 (counter hoax message) and the variable Y (emotional response).

Linearity test VAR_Y1_respon_emosional * VAR_X2: The significance value for the linearity deviation also exceeds the predetermined alpha level. With a significance value of 0.202 compared to an alpha value of 0.05, it indicates a substantive linear relationship between variable X2 (credibility of the message source) and variable Y (emotional response).

In terms of the Multicollinearity Test, the calculated statistics revealed a Variance Inflation Factor (VIF) of 1.525 for hoax counter messages, coupled with a tolerance of 0.656. Since both the VIF is under 10 and the tolerance exceeds 0.1, no evidence of collinearity between the independent variables is apparent. This conclusion is corroborated by meeting the criteria for the lack of collinearity among the independent variables. Additionally,

assessing collinearity between independent variables through Eigenvalue and Condition Index analyses reinforces this finding.

6.2 Multiple Regression Test

In this study, the multiple regression analysis utilised the "enter method," introducing predictors based on a significant F value (below 0.05) while eliminating nonsignificant predictors (F significance above 0.05). The adjusted square value of R resulting from this analysis is 0.801. This value signifies that approximately 80.1% of the variations observed in the emotional response variable can be ascribed to the influences of both counter-hoax messages and the credibility of the message source.

The variation in the independent variables included in the model (counter hoax message and message source credibility) accounts for approximately 19.9% of the variance in the dependent variable. On the contrary, the remaining 80.1% of the variation is probably influenced by other variables not included in this research model. A higher R Square value indicates a more robust ability of the independent variables to explicate changes observed in the dependent variable.

Since the research data are not time series, testing for autocorrelation using the Durbin-Watson formula, with a value of 1.985, is unnecessary. Furthermore, the ANOVA test, a simultaneous test utilising the F-Test, indicated a calculated F value of 569.762 with a significance level of 0.000. This signifies that both the counter-hoax message and the credibility of the message source exert a concurrent impact on the emotional response variable. Upon conducting the t-test, the t-count value for the counter-hoax message variable yielded a value of 3.991 with a significance level of 0.000, indicating a significant effect of counter-hoax messages on emotional responses. Similarly, the t value for the message source credibility variable was 24.802 with a significance level of 0.000, leading to the conclusion that the credibility of the message source also significantly impacts emotional responses.

6.3 Multiple Regression Equation

From the results obtained, the multiple regression equation illustrating the influence of counter-hoax messages and the credibility of the message source on emotional responses can be represented as follows:

- Constant (a) = -3.105
- The regression coefficient for counter-hoax messages (b1) = 0.203
- The regression coefficient for the credibility of the message source (b2) = 0.533

Interpretation of the regression equation:

- The constant (a) of -3.105 indicates that when both the counterhoax message variable (X1) and the credibility of the message source variable (X2) are zero, the emotional response is -3.105.
- The regression coefficient b1 of 0.203 suggests that with the X2 variable at zero, for each unit increase in the X1 variable, the emotional response increases to -2.902.
- The regression coefficient b2 of 0.533 indicates that with the X1 variable at zero, for every unit increase in the X2 variable, the emotional response increases to -2.572 Partial correlation.

The relationship of the counter-narrative message (X1) to the emotional response (Y) by controlling the source credibility variable (X2).

6.3.1 Partial Correlation

Assessing the relationship between the counternarrative message (X1) and the emotional response (Y) while controlling for the source credibility variable (X2).

H1a: *There is a relationship between counter-narrative messages (X1) and emotional response (Y) by controlling the source credibility variable (X2).*

The correlation coefficient between counter-narrative messages (X1) and emotional response (Y) while controlling for the source credibility variable (X2) is 0.232, with a p-value of 0.000. Given that the p-value is less than $\alpha = 0.05$, it can be concluded that there exists a significant relationship between counternarrative messages (X1) and emotional response (Y) while controlling for the source credibility variable (X2).

H1b: There is a relationship between the credibility of the source of the message (X2) and the emotional response (Y) by controlling the counterhoax message (X1).

The correlation coefficient of the Message Credibility Variable (Variable X2) on the Emotional Response Variable (Variable Y), with Variable X1 controlling its effect on Variable Y, is 0.829, and the p-value is 0.000. With the p-value being less than $\alpha = 0.05$, it can be concluded that there is a significant relationship between the Message Credibility Variable (Variable X2) and Emotional Response Variable (Variable Y), with Variable X1 controlling its effect on Variable Y.

7. Discussion

Various data in this research show that counternarrative activities can be effectively used by the state to counter the dominance of hoax narratives that can disrupt society. Its effectiveness occurs when the public needs good and correct information in times of crisis, outbreak, or pandemic. This research finds the reliability of counternarratives as a tool to counteract dominant negative narratives that attack the government's credibility. In this research, government counter-narratives were carried out to overcome various hoaxes about the COVID-19 virus during the pandemic.

In this study, various data underscore the effectiveness of counter-narrative initiatives as viable tools for mitigating the prevalence of hoax narratives that could potentially disrupt societal harmony, especially during crises, outbreaks, or pandemics. The research findings highlight the reliability of counter-narratives in combating prevalent negative narratives that challenge the government's credibility. Specifically, government-led counter-narratives aimed to dispel misinformation surrounding the COVID-19 virus during the pandemic.

The Jabar Saber Hoaks, a division within the West Java Provincial Government's Communication and Information Service, succeeded in rectifying skewed information concerning COVID-19 prevalent in the community during the pandemic. Government-led counter-narrative activities proved effective in curtailing the dissemination of deliberately spread hoaxes that could adversely impact public awareness.

The Covid-19 pandemic witnessed a surge in misinformation regarding the virus, propagated frequently with negative intentions, potentially destabilizing a society fraught with fear during that period (Lowe, 2012; Gorbach, 2018; Thornton, 2000; Fleming & O'Carroll, 2010; Mejova et al., 2021). The ramifications of such hoaxes included widespread scepticism toward the government's pandemic-related announcements, resulting in noncompliance with essential safety measures like the 3M campaign (mask-wearing, hand hygiene, and physical distancing) and vaccine hesitancy.

To counter these challenges, the West Java Regional Government established the Jabar Saber Hoaks Unit to assist the public in discerning and averting exposure to hoaxes. Through various counter-narrative efforts, disseminated via text, video, and audio across social media platforms (Moreno-Castro et al., 2021), the unit operated with specific mechanisms (Dionisopoulos, 2009; D. Boje & Lundholt, 2018; D. M. Boje, 2002; Tchakounté et al., 2020). The primary objective of this initiative was to protect the public from disinformation and false news (Sellnow et al., 2009; Lewandowsky & van der Linden, 2021), counter the surge of societal-threatening hoaxes (Sarathchandra & Haltinner, 2021; Park & Rim, 2021), debunk specific hoaxes (Kaiser, 2021), and minimise acts of violence (Carthy & Sarma, 2021) while also targeting community groups susceptible to exploiting circulating hoaxes in West Java (McGregor, 2020; Orlando, 2018).

The success of these government-led counternarratives was further bolstered by the community's exigency for credible, educational, and insightful information delivered through engaging presentation techniques. This research highlights the perceived credibility of the West Java government's counternarrative activities in disseminating information about the Covid-19 virus (Iqbal et al., 2019). Counter-narrative messages are seen as having more educational value (Miller et al., 2020) and offering alternative perspectives (Mordhorst, 2008). The delivery of counter-narratives is often perceived as humorous, fact-based, and logically constructed (Ördén, 2018), presenting concrete narratives that promote positivity and purpose (McMahon & Kaiser, 2021; Martinez, 2017; Barrowcliffe, 2021).

The success of government counter-narratives in combating the dominance of hoaxes in West Java society during the pandemic is attributed to the effective integration of systematic information processing, encompassing variables such as mutual information and communication channels. Moreover, these counter-narratives consider communication effectiveness in aspects like delivery time, message length, and visual elements. They also account for real-time delivery and diverse demographics of the audience, understanding the nuances of social information distribution on online platforms (Poorisat et al., 2019). Instagram and WhatsApp were prominently used as primary social media platforms to spread government counternarrative initiatives during the pandemic."

8. Future Research and Recommendations

This study is subject to limitations due to its focus solely on two factors—the message and the credibility of the source—influencing individuals' emotional responses. Future research should aim to incorporate additional variables and explore the impact of government counter-narratives across diverse contexts, including regular periods and various problem domains. A broader, larger-scale investigation is recommended considering the effects of other factors on cognition, attitudes, and behaviour.

By analyzing variables such as source, message, channel, and audience within different temporal contexts (e.g., normal times, socio-political issues) or geographical contexts (e.g., different countries, major cities), researchers can diversify the exploration of effects. Examining various perspectives, particularly the correlation between government counter-narratives and people's cognitive awareness, attitudes, and behaviors, remains relatively underexplored. Such studies could provide insights not only into the effectiveness of counternarratives but also into a critical aspect crucial for a government's sustainability: its influence on citizens regarding vital issues.

9. Conclusions

The emergence of the COVID-19 pandemic prompted the West Java Regional Government to initiate robust counter-narrative activities that significantly impacted society's response to the proliferation of misinformation and hoaxes. Specifically, the dissemination of counternarrative messages by Jabar Saber Hoaks (JSH), a division of the West Java Regional Government's Communication and Information Service, effectively debunked online rumours through meticulous fact-checking.

Jabar Saber Hoaks (JSH) earned recognition for its role in curbing falsehoods within West Java society. The counter-narrative messages conveyed distinctly affected individuals' emotional reactions. Throughout the pandemic, the West Java government consistently delivered a multitude of informative counternarratives pertaining to COVID-19. The community perceives the government's narrative as credible due to its educational content, provision of alternative perspectives, and engaging presentation style, which is being implemented as a blend of humour, factual accuracy, and logicity.

The influence of counternarratives disseminated by nongovernment entities had minimal impact on society during the pandemic. Consequently, when controlling for source credibility, the counter-narrative message exhibited a moderate influence on emotional reactions.

Upon adjusting for counternarrative messages, the credibility of the message source wielded a substantial effect on emotional responses. Society regarded the government as credible, particularly in terms of safety, qualifications, and dynamism during the pandemic. It is believed that the government's credibility will assuage feelings of boredom, fear, and anger among individuals in response to the numerous hoaxes propagated by various entities.

Acting as a government representative, Jabar Saber Hoaks (JSH) was perceived as credible, particularly in the context of 'The Security Level of the Source in Counter-Narrative Messages' and 'The Counter Message Source Exhibited a Moderate Level of Aggression.' It is evident that the credibility of counter-narrative messages significantly influences factors such as viewership frequency of counter-narrative shows, attractiveness of non-verbal cues (facial expressions, body language), voice appeal, verbal language allure, and emotional resonance within message appeal." When adjusting for counter-narrative messages, the credibility of the message source has a considerable effect on emotional responses. The community viewed the government as credible in terms of "safety, qualifications, and dynamism" at the time of the pandemic. It is believed that the credibility of the government's message will overcome the people's "boredom, fear, and wrath" towards the many hoaxes propagated by various parties. As a government agent, Jabar Saber Hoaks (JSH) is deemed credible while delivering communications in "The Security Level of the Source in Counter-Narrative Messages, and The Counter-Message Source Exhibited a Moderate Level of Aggression." It is believed that the credibility of counter-narrative messages influences "the frequency with which counter-narrative shows are viewed, the attractiveness of non-verbal language (facial expressions, body movements, and body postures), the attractiveness of voice, the attractiveness of verbal language, and message appeal (words that evoke emotions).

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