

# A Conceptual Perspective on Natural Disasters Related Information Verification Behaviors among Youth on Social Media

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## Abstract

Social media are known as powerful sharing tools; they can play an important role before, during, or after a natural disaster. Youth are closely attached to social media and are expected to be the leading receiver of natural disaster-related information. Understandably, they need to verify the information they received before considering using or sharing it; otherwise, fake news/information can be spread and chaos in the community. It is known that the existing models on information verification behavior have several areas for improvement, such as its study's scope (not focusing specifically on social media) and its methodological problem (sampling bias, sample size, the reliability of analysis performed, not having intervening variables). Due to this, improvements are required to suit the current setting. Hence, this review aims to understand several factors influencing youth's verification behavior on natural disaster-related information received from social media channels. The study explanation of several influential factors is expected to enhance understanding of the current pattern of verification behavior practiced by youth, and this enables interested parties to plan strategies in line with the youth's needs, abilities, and interests. Moreover, the study can serve as a basis for agencies such as NADMA to develop prevention strategies against fake information/news on natural disaster related information, especially one that is disseminated via social media.

**Keywords:** Information Verification Behavior, Natural Related Disaster, Youth, Social Media

## Introduction

Social networking sites have become an essential information tool nowadays. Virtual networks such as Facebook, Twitter, Instagram, and Tik Tok have provided important socio-economic information to the community. At the current state, there is a diverse type of information shared in these channels, one related to natural disasters. Natural disasters are significant adverse events resulting from natural processes of the Earth; countries across the globe are facing these natural threats. In Malaysia, the community faces formidable challenges from natural disasters such as floods, tsunamis, storms, and landslides. In the case

of natural disasters, social media has played more important roles, especially in disseminating important information to the public. Natural disasters pose a significant threat to human lives and property. In the recent flood that hit Malaysia, more than 125,000 people were affected, and 54 deaths were recorded (Malay Mail., 2022). The current global climate situation is unpredictable and expected to worsen in the future; hence, the community should be well prepared to respond to other similar strikes in the future. To do this, disseminating rapid and reliable information to the community is vital and social media can be an effective tool. If responsibly and appropriately used, social media offers fast and effective dissemination routes for important information (Chan et al., 2020).

As we know, youths are highly attached to social media; most rely on it for sharing and seeking information, entertainment, adding new friends, socializing, and conducting business (Ahmad Ghazali, 2021). Unsurprisingly, they might be the largest group that receives natural disaster-related information. Nonetheless, Chan et al (2020) have stressed that social media must be responsibly and appropriately used, or otherwise, there are possibilities that dissemination of fake news/information might occur. Fake news is dangerous as it can influence others to change their behavior ultimately might influence others to have a wrong assumption or perception of something; and also, in some parts of the world, including Malaysia, there can be legal consequences for publishing and sharing fake news (Chan et al., 2020). To avoid further incidents of these situations, information verification skills might play an important role (Torres et al., 2018). Information verification behavior can be understood as the extent to which an individual actively seeks to corroborate the claims of information received (Flanagin & Metzger, 2000).

The information verification behavior can act as an 'awareness behavior' which alerts them to the rapid delivery and dissemination of information via social media networks. Natural disaster information is a continuing issue; however, we conclude from our readings that there is the possibility that no to less recent studies try to understand how people verify natural-related information via social media channels. However, we found several related studies that reported information verification behavior. Koohikamali and Sidorova (2017) have studied how undergraduate students in the United States verify fake news from the perspective of their behavior. Nevertheless, Koohikamali and Sidorova (2017) stressed the limitation of the study - no element of information quality is needed to ascertain the causal nature of the relationships between verification practices and human behavior. A study by Waruwu et al. (2021) and Hilary et al. (2021) studied how people try to authenticate news they receive. Still, their qualitative studies make it hard to generalize them to the more significant population. Ali et al (2022); Sampat et al (2022) have studied youth's perceived credibility and intention to share fake news. Still, it might be hard to be generalized to other social media as it focuses on Facebook. Although Torres et al (2018) attempted to investigate a model for verifying fake news, their model has to be improved because it contains too many dependent variables (three). The methodological perspective might create 'chaos' instead of understanding the issue studied (Dwivedi et al., 2017).

Several theories/models can explain how communities seek and verify their natural-related information. These include Two expectancy-value models, self-categorization theory, expectancy-value model approach, information-seeking theory, and two-step flow models. Most of these theories/models describe how people receive information, what information they seek, and how they verify it before using it. Nevertheless, despite their existence, these models have several deficiencies, such as their study's scope (not focusing specifically on social media) and its methodological problem (sampling bias, sample size, the reliability of analysis performed, not having intervening variables) (Marton and Woo, 2012).

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Furthermore, due to its deficiencies related to - its study's scope (not focusing specifically on social media) and its methodological problem (sampling bias, sample size, the reliability of analysis performed, not having intervening variables), the existing models on information verification needs some improvement to suit it to the current setting. The review aims to comprehend the deficiencies of previous studies of Koohikamali and Sidorova (2017); Waruwu et al (2021); Hilary et al (2021); Ali et al (2022); Sampat et al (2022); Torres et al (2018); Dwivedi et al (2017); Marton and Woo (2012) by explaining potential factors that can assist in understanding on how youths verify natural disasters related information.

### **Methodology**

The review relies on several main keywords in its search process. Keywords such as information verification behavior, youth, natural disaster and social media were used. To enhance the possibility of getting more keywords, the authors try to search for any synonyms or related terms related to the main keywords. Identification of the synonyms and associated terms of the essential keywords was referred to the online thesaurus and keywords used by past studies. In this process, additional keywords such as flood, drought, social networking and youngsters were used in the searching process. The authors rely on advanced searching techniques such as phrase searching and Boolean Operator OR and AND whenever possible. Three main databases were used in the search process, namely Scopus, Science Direct, and Google Scholar. The initial search process resulted in a total of 125 articles, and after the screening process was done, it was reduced to only 30 articles.

### **Potential factors affecting information verification behavior among youth**

The review discusses six potential factors that might influence information verification behavior among youth: social motivation, heuristic, social tie variety, perceived cognitive homogeneity, and information quality and fake news awareness.

### **Social Motivation**

Referring to a study by Waruwu et al (2021), social motivation relates to people being more likely to authenticate the information related to them or impact their social relationships. This study explains that regarding information verification behavior, two types of social motivation

have the most influence: maintaining self-image and preserving group cohesion. Waruwu et al (2021) informed that people have a reason to protect their self-image as they know the negative impacts of sharing fake news on their reputation. Sharing fake news makes them vulnerable to social judgment, lessens their credibility, and might result in people's disbelief. Preserving group cohesion is another thing that drives people not to share fake news. Sharing valuable information is considered a gift, and verification acts communicate the sharer's commitment to presenting only excellent quality gifts. Sharing fake news undermines the sender's relationship with their groups, which gears them to authenticate their news offerings because the authentication increases their confidence in their news contribution and maximizes the chance of reciprocity (Waruwu et al., 2021).

#### *Heuristic*

The heuristic is another factor to be considered in the information verification setting. A study by Pennycook and Rand (2021) explains heuristic or mental short cut can be a factor that influences people's verification acts. Several aspects can be related to heuristics; familiarity with news shared with them can be one of them, whereby a single prior exposure to a fake news headline increases later belief in the headline. The heuristic can also be associated with people's preferences to believe in sharing information provided by people they see as credible and reliable. Furthermore, positive social feedback, which can be viewed on social media platforms (e.g., 'likes'), also increases belief in news content even though its authenticity is yet to be confirmed (Avram et al., 2020). Lastly, people's evocative emotions might influence them to believe fake news. Whether negative or positive, people's feelings are more likely to believe false news due to their strong attachment to information shared in that news (Martel et al., 2020).

#### *Social tie variety*

Social tie variety can be understood as "the diversity of offline groups and contexts represented in one's online social network" (Gerhart & Sidorova, 2017). Youth may have various online networks, allowing them to interact with multiple people. As this happens, individuals may experience changes when encountering new situations, places, and people. Furthermore, youths, via social media, might share different identities depending on what type of group they meet (Styven & Foster, 2018). This situation strengthens the possibility of having a diversity of perspectives and viewpoints in the community (Ellison et al., 2014; Torres et al., 2018). In such a circumstance, members may be prompted to scrutinize any information offered within the community, particularly if it contradicts their knowledge or information. In such a situation, the appearance of opposing opinions indicates that people are becoming more aware of the possibility of false news (Torres et al., 2018; Kumar & Geethakumari, 2014).

#### *Perceived cognitive homogeneity*

Perceived cognitive homogeneity is another potential factor influencing information verification behavior among youth. This factor refers to "the extent to which a person perceives members of his/her network to share his or her views and beliefs and eliminate opposing viewpoints or beliefs" (Gerhart & Sidorova, 2017; Coastes et al., 2021). Such behavior is known as homophily, where people prefer to be in the same networks with those they perceive as similar (Sun et al., 2021). Sun et al (2021) elaborated that network size can moderate the relationship between cognitive homogeneity and news sharing. Those with a large number of online friends are predicted to share more. However, Sun et al (2021) demonstrated the influence of networks size on factual news and not on fake news. Within

perceived cognitive homogeneity, individuals are less exposed to various perspectives, arguments, and debates associated with their beliefs, thus decreasing their opportunities to detect false information and lower their awareness of fake news. Determining common belief structures needs knowledge-based familiarity, a strong pillar of trust (Torres et al., 2018). Youths are expected to project a desired social identity, enabling them to assess the level of cognitive homogeneity between themselves and other associates (Gerhart & Sidorova, 2017). Youths who perceive themselves as having similar viewpoints are likelier to be close to each other than individuals who perceive themselves as different (Nair, 2011). Furthermore, youths prefer to trust those with beliefs similar to themselves, and without the element of cognitive homogeneity, interpersonal trust between the youths and other network members may not exist (Iyengar & Westwood, 2015).

#### *The mediating influence of quality information*

Quality information might affect youths' awareness of fake news. The quality depends on how usable and how much they receive from the information (Koochikomali & Sidorova, 2017). The quality of the information might be subjective and might provide an opportunity for fake news or false information to be considered legitimate sources. Information written and arranged properly might be good, though it contains misleading information (Guess et al., 2019). Information quality also affects their trust in networks, the more frequent quality information they receive; the more trust youths will have in the networks they settle in. Information verification behavior can be understood as the extent to which an individual actively seeks to corroborate the claims of information received (Flanagin & Metzger, 2000).

#### *The mediating influence of fake news awareness*

The information verification behavior can act as an 'awareness behavior' which alerts them to the rapid delivery and dissemination of information via social media networks. Verification behavior can act as a self-filter for individuals and, at the same time, obstruct any misleading news from being disseminated, which later might create chaos in the community (Schaewitz et al., 2020). Information verification skills are essential nowadays as available fake news appears to originate from a traditional news source has a more significant influence on the reader (Torres et al., 2018). This issue is compounded because fake and original news stories are shared through social media, further complicating detecting the fake ones (Chan et al., 2020). People may use various methods to recognize fake news, unique to their abilities and experience. While news/information sources may occasionally report inaccurate information, youth who can spot inaccuracies may seek alternate sources of information to further their understanding. (Torres et al., 2018). If the youths are unaware of the disseminated fake news, they may not be interested in verifying the information they received. In contrast, others serve as 'self-editor' and are responsible for evaluating the quality of information they receive (Chusnuttivat & Thammakoranonta, 2017). As a result, while youth may actively seek more excellent knowledge, they should engage in information verification behaviors, which necessitate understanding the information's authenticity. As a result, those keenly aware of fake news are more likely to engage in verification activities than those needing help distinguishing between genuine and illegitimate information sources.

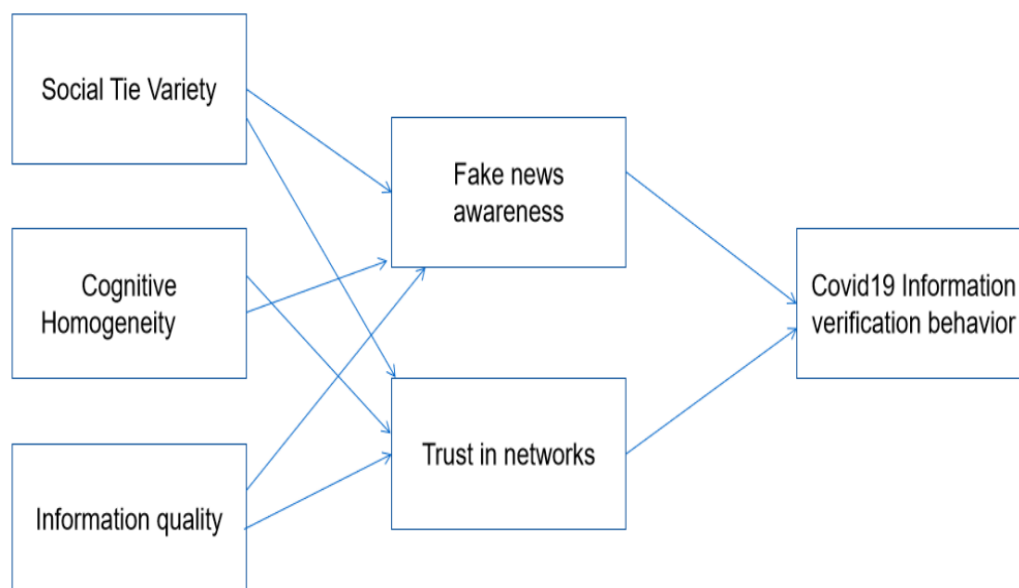


Figure 1: Suggested framework on natural disasters related information verification behaviors among youth on social media

### Conclusion

This review provides explanation on the ability of six potential factors namely social motivation, heuristic, social tie variety, perceived cognitive homogeneity, and information quality and fake news awareness to enhance understanding on how youths verify natural-related disasters information that they received from the social media. The study offers several significant contributions concerning the practical and the body of knowledge. By referring to the potential factors explained, the interested parties such as policymakers, the public, and researchers can now understand that there is a mounting need to comprehend youth information-seeking behavior related to natural disasters and the factors influencing it. The main limitation of this study it is a kind of traditional review whereby its main advantages is the issue of retrieval and publication biases.

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