Analysis of Sources and Channels of Disinformation Reported by Electronic Newspapers in Malaysia

Isyaku Hassan[1*], Mohd Nazri Latiff Azmi[2]

[1,2] Faculty of Languages and Communication, Universiti Sultan Zainal Abidin, Gong Badak Campus, 21300 Kuala Terengganu

[*]Corresponding Author's email: isyaku87@gmail.com
https://doi.org/10.61211/mjqr100107

ABSTRACT

Disinformation is viewed as an intractable social problem. In Malaysia, a total of 260 disinformation cases were recorded as of September 2020. This situation needs urgent attention to curtail the spread of disinformation and its impact on society. Despite important steps taken by the government to guarantee people's access to accurate and trusted information, the formation and sharing of disinformation continue to occur. Additionally, research into the sources and channels of disinformation is either lacking or inadequate, particularly in the Malaysian context. Therefore, using the sociotechnical model of media effects, this research sought to explore the agents and channels through which disinformation spreads in Malaysia. The sociotechnical model of media effects explains how social and technological factors interact to shape the use of information channels by individuals and society. In the current research, a total of 48 news articles directly related to disinformation cases were subjected to qualitative content analysis. The articles were gathered from the digital archives of the three most widely read Malaysian English newspapers: The Star, Malay Mail, and New Straits Times. The findings reveal that individuals from various professions are identified as agents of disinformation in the reported cases. The agents are more likely to be identified by their professions rather than age or gender. For channels of disinformation, Facebook represents the dominant theme, followed by WhatsApp, Twitter, and websites. It is envisaged that this study could provide valuable insights for policymakers, media organizations, and the government to curtail the phenomenon of disinformation.

Keywords: digital newspapers, disinformation, media effects, sociotechnical model

Article Info:
Received: 3 March 2024
Accepted: 28 April 2024
Published: 31 May 2024

INTRODUCTION

Disinformation is described differently by various scholars with different terms, for example, "intentional deception" (Finneman & Thomas, 2018), "information disorder" (Jorgensen et al. 2018), and "similar to real news" (Tandoc et al., 2018). Disinformation, generally, is described as any form of misinformation deliberately fabricated and spread to mislead audiences for political and/or financial gains (Freelon & Wells, 2020; Kuo & Marwick, 2021). Forms of disinformation include misleading content, manipulated content, fabricated content, false context of connection, satire, and parody (Wardle & Derakhshan, 2018). Disinformation is most similar to lies that affect people's perceptions of particular subjects, events, individuals, or groups. With the recent advancements in new communication technology, disinformation appears to closely resemble genuine news. The subject of disinformation is a transdisciplinary area of research interest adopted by science and social science researchers (Zhou, Zafarani, Shu, & Liu, 2019).

Currently, disinformation has become an intractable social phenomenon discussed not only by communication scholars but also among the public. The spread of disinformation has significantly increased due to the outbreak of Covid-19 (Pulido, Villarejo-Carballido, Redondo-Sama, & Gómez, 2020; Rodríguez, Cardona-Ospina, Gutiérrez-Ocampo, Villamizar-Peña, Holguin-Rivera, Escalera-Antezana, et al., 2020; Boberg, Quandt, Schatto-Eckrodt, & Frischlich, 2020). Governments across the globe have instituted various regulations to curtail the

spread of disinformation. In doing so, the governments employed various public awareness strategies, including advertising campaigns and press conferences (Rodrigues & Xu, 2020).

In April, Malaysia passed an anti-fake news bill to sanction those who publish or spread any news, information, data, and reports that are partly or wholly false (AsiaGlobal Online, 2018) to mitigate the spread of disinformation. Despite the government's efforts, the formation and sharing of misinformation occur rapidly, especially through Social Networking Sites (SNSs) (Liew, Khoo, Cheah, Goh, & Ibrahim, 2020). As disinformation becomes more prevalent than ever before, various conventional frameworks for disinformation verification have been put in place (Aldwairi & Alwahedi, 2018; Reis, Correia, Murai, Veloso, Benevenuto, & Cambria, 2019; Wang, 2017; Zhang, Cui, Fu, & Gouza, 2018). Previous studies focusing on the spread of disinformation paid attention to the spread and verification techniques via social media (e.g. Boberg et al., 2020; Pulido et al., 2020; Rodríguez et al., 2020). Accordingly, previous research suggests a particular focus and systematic investigation into the sources of disinformation (Hassan, Azmi, & Abdullahi, 2020), which is either lacking or inadequate. Therefore, the current study investigates the agents and channels of disinformation between March and September 2020 using Malaysian electronic newspapers as a source of data. Specifically, the study sought to address the following questions.

1. Who are the agents responsible for spreading disinformation in the Malaysian context?
2. In what channels do the agents convey disinformation?

BACKGROUND OF STUDY

The spread of fake news has become more dangerous than ever before (Sharma, Qian, Jiang, Ruchansky, Zhang, & Liu, 2019; Zulhafizsyam & Sulaiman, 2022). The growing trend of disinformation has impacted individuals and societies across the globe (Hassan, Musa, Azmi, Abdullah, & Balogun, 2022; Othman, Hassan, Sabri, & Nayan, 2020; Zubair, Raquib, & Qadir, 2019). According to Zubair et al. (2019), disinformation has severe negative effects on social security and privacy. These negative implications are likely to cause disharmony, tension, and conflict in society. Several conflicts associated with disinformation occur globally. This phenomenon developed gradually and has greatly increased in intensity.

A number of studies have looked at the quality of information, especially during due to the outbreak of Covid-19, from different perspectives and using various approaches (Cuan-Baltazar, Muñoz-Perez, Robledo-Vega, Pérez-Zepeda, & Soto-Vega, 2020; Boberg et al.,2020; Brennen, Simon, Howard, & Nielsen, 2020; Kouzy, Abi Jaoude, Kraitem, El Alam,Karam, Adib et al., 2020; Pulido et al., 2020; Rodríguez et al., 2020; Stanley, Barr, Peters,& Seli, 2021). Most of these studies found that disinformation spreads rapidly, and is likely to cause inappropriate actions. For example, Stanley et al. (2020) found that individuals who are less willing to engage in effortful, deliberative, and reflective cognitive processes were more likely to fall for disinformation and less likely to take action.

In addition, Pulido et al. (2020) examined the spread of disinformation on Twitter. The study found that disinformation is tweeted more but retweeted less than fact-checking tweets. Similarly, Rodríguezet al., 2020) compared the type of tweets and Sina Weibo posts. The study showed that there is more disinformation published and shared on Twitter than on Sina Weibo. In a similar vein, Boberg et al. (2020) investigated the factual basis of fears resulting from Facebook postings. The findings showed that social media users predominantly share overly critical, even anti-systemic messages, opposing the view of the mainstream news media. Social media has been criticized for furthering societal confusion and spreading potentially dangerous disinformation (Boberg et al., 2020).

Furthermore, Brennen et al. (2020) identified some of the types of disinformation. According to the study, the volume of different kinds of disinformation has almost certainly grown faster while true information is often spun, twisted, recontextualized, or reworked. Similarly, Kouzy et al. (2020) examined the magnitude of disinformation on Twitter. The findings indicated that a large amount of the tweets contained genuine information while almost one-third contained disinformation. Shu (2023) also found that disinformation "has increasingly become a hindrance to the functioning of online social media as an effective channel for trustworthy information" (p. 15454). Likewise, another study found that key challenges to disinformation include fake social media accounts and a lack of information literacy (Shahzad, Khan, Iqbal, Shabbir, & Latif, 2023). According to Kouzy et al. (2020), disinformation and unverifiable content are being propagated at an alarming rate. In this regard, Ahsan, Ayub, and Azman (2021) pointed out the need for individuals to acquire skills that can help identify and evaluate online information.

Cuan-Baltazar et al. (2020) evaluated people's perceptions of online information quality. The study found that localities perceive the quality of information differently. With the rapid spread of disinformation, people around the world express panic in various behaviors. This situation affects educational, health, and economic sectors, as

well as people's social values and psychological stress (Bikbov & Bikbov, 2020; Nicomedes & Avila, 2020). It is evident that disinformation circulates fast and is often inaccurate, misleading, and far more shared than evidence-based information (Ioannidis, 2020; Rodríguez et al., 2020). In summary, recent previous studies have focused on the types, dangers, and spread of disinformation as well as its effect on various sectors. Therefore, the current research focuses on the agents and channels of disinformation in the Malaysian context.

Theoretical Approach

To identify the sources and channels through which disinformation is conveyed, this research will adopt the sociotechnical model of media effects as described by Marwick (2018). This model, among other suppositions, examines "actors to understand group identity and media" (Marwick, 2018, p. 488). Various elements, such as information sources, media, content, and context collectively generate communication effects. While media effect theories such as framing and agenda-setting emphasize how news construction or media coverage influences people's opinions about particular issues (McCombs & Shaw, 1972; Iyengar, Peters, & Kinder, 2004), the sociotechnical model of media effects considers the role of individual agents in constructing and spreading media messages (Marwick, 2018). Based on this central theoretical viewpoint, the research argues that agents tend to spread disinformation across various platforms. This investigation was performed using content analysis (Hsieh & Shannon, 2005) as explained in the following sections.

METHOD

This research employed a qualitative content analysis method to investigate the agents and channels of disinformation from selected Malaysian electronic newspapers. Hsieh and Shannon (2005) defined qualitative content analysis as "a research method for the subjective interpretation of the content of text data through the systematic classification process of coding and identifying themes or patterns" (p. 1278). The content analysis approach was selected due to its strength in producing diverse data from media content. This method also involves text-based media content (Hsieh & Shannon, 2005; Oleinik, 2011) which can be a more consistent technique based on evidence compared to other methods such as discourse analysis (Weaver, 2007). The content analysis reviews texts and other media content by means of both emerging themes and existing categories to test or generate a theory (Cohen, Manion, & Morrison, 2002). This method has been effectively utilized in media studies (Chen, Huang, & Li, 2022; Hassan & Azmi, 2019; Sink & Mastro, 2017).

Data Collection

The data were collected from three major English newspapers in Malaysia: The Star, New Straits Times, and Malay Mail. These newspapers were selected as they represent the most widely-read online newspapers published in English (Mediapod, 2024). It is worth mentioning that this research does not focus on how the newspapers report or spread disinformation. The newspapers only serve as sources of data due to their capacity to offer valuable data for study purposes. Wimmer and Dominic (2013) suggest that content analysis is appropriate for research seeking to scrutinize the content of verified information through an organized process. The current research adopted a purposive sampling technique. Concerning the news articles, a sample was collected from 1st March to 31st September 2022. This period represents the time when disinformation rose significantly due to the COVID-19 outbreak (Boberg et al., 2020). In addition, the period has experienced its share of significant disinformation cases in Malaysia (New Straits Times, 2020). This time frame is also selected to make the data into a controllable size for analysis. Thus, a variety of data about disinformation could be retrieved via the selected newspapers.

The newspaper articles were collected using "disinformation" and "fake news" as search keywords. To be included in the sample, each news article had to fulfill five a priori requirements: (1) must be a report on disinformation; (2) must be a straight news or feature story; (3) must be published between 1st March to 31st September 2020; (4) must be produced in the English language; (5) must be accessible online. Equally, only straight news and feature articles were recognized for analysis because the newspapers tend to report disinformation cases in the news section of their websites. Initially, 83 articles were gathered from the respective digital archives of the newspapers. However, 46 news articles were excluded due to inappropriateness, meaning they did not fulfill one or more of the specified a priori requirements, and thus were deemed unsuitable for analysis. Finally, 37 articles were coded and analyzed. Correspondingly, this study focused on digital news content because the audience can always access digital news (Chung, 2008; Hassan & Azmi, 2018). As stated earlier, newspapers are viewed as a strong source of data (Hassan et al., 2020).

Analysis and Coding Procedure

The data were analyzed using inductive content analysis. The analysis was performed using the seven core steps of content analysis described by Hsieh and Shannon (2005): 1) formulating the research questions to be answered; 2) selecting the sample to be analyzed; 3) defining the categories to be applied; 4) outlining the coding process

and the coder training; 5) implementing the coding process; 6) determining trustworthiness; 7) analyzing the results of the coding process. According to Hsieh and Shannon (2005), "coding categories are derived directly from the text data" (p. 1277) and well-defined during data analysis. The coding process begins by reading through the data and highlighting all texts that appear to represent the research topic. The second step involves coding all highlighted passages using the predetermined codes. Likewise, "any text that could not be categorized with the initial coding scheme would be given a new code" (p. 1281). At the initial stage, each newspaper article in the sample was read to determine its suitability. The content of each article was considered and coded qualitatively. A database was formed for open coding. The coding procedure consists of reading through the articles, identifying, categorizing, and interpreting themes. For reliability, an inter-coder test was performed by two independent coders.

FINDINGS

This study focuses on agents and channels of disinformation reported in selected Malaysian electronic newspapers between March and September 2020. The first research question relates to the agents responsible for spreading disinformation. The emerging themes revealed nine (9) agents of disinformation in the Malaysian context as presented in the following table.

Table 1: Agents of Disinformation

SN	Category	Theme	Exemplary Quotes	Mentions (Count)
1	Pharmacy Assistants	Arrest of pharmacy assistants	Two pharmacy assistants [were] arrested	3
2	Clerks	Involvement of bank clerks	A bank clerk is the latest person to be questioned	3
3	Dispatch Runner	Charges against a dispatch runner	…dispatch runner [was charged in spreading disinformation]	2
4	Students	Arrest of a university student	…and a university student [was] arrested	2
5	Foreigners	Involvement of an Indonesian woman	…Indonesian woman [charged for spreading disinformation	2
6	Tutor	Arrest of a temporary tutor	…temporary tutor was arrested	2
7	Food Deliveryman	Involvement of a food deliveryman	A food deliveryman [was charged for disinformation]	1
8	Artist	Mention of the Malaysian Artistes Association president	Malaysian Artistes Association (Seniman) president	1
9	Salesgirls	Arrest of a salesgirl for disinformation	[the accused] …who works as a salesgirl	1
10	Fisherman	Involvement of a 64-year-old fisherman	A 64-year-old fisherman…	1

As shown in Table 1, various individuals are involved in spreading disinformation within the Malaysian context, identified by their status or professions, including pharmacy assistants, clerks, dispatch runners, students, foreigners, tutors, food deliverymen, artists, salesgirls, and fishermen. This outcome suggests that disinformation is not limited to a particular demography in Malaysia. Individuals from various backgrounds are involved in spreading disinformation, which suggests the need for a multifaceted approach to address disinformation in the Malaysian context. The emerging themes suggest that the most commonly-mentioned cases concerning the spread of disinformation include the arrest of pharmacy assistants and the involvement of bank clerks, followed by charges against dispatch runners, the arrest of university students, the involvement of foreigners, and the arrest of temporary tutors.

The disinformation cases involving individuals with different sorts of professions are reported in different locations across the country. For example, *The Star* newspaper reported on January 29, 2020, "A tutor, two pharmacy assistants, and a university student were arrested for spreading fake news" in Melaka, Kedah, and Pahang". Additionally, *The Malay Mail* reported on January 30, 2020, "a 28-year-old woman [who] works as a bank clerk [was detained] in Kuantan, Pahang". Similarly, *The Star* mentioned on January 29, 2020, "A 24-year-

old student at a public university in Kuantan". In Kuala Lumpur, a food deliveryman was charged with committing a fake-news offense at Desa Jaya, Gombak (Malay Mail, April 20, 2020).

Also, the *New Straits Times* mentioned on February 14, 2020, police recorded the statement of a 64-year-old fisherman in connection with disinformation in Kelantan. On the same day, the newspaper reported that "three cases had been brought to court, one each in Kuala Lumpur, Terengganu, and Sabah". Other cases were reported in Johor, Sarawak, Penang, and Selangor. The second research question relates to the channels through which disinformation is conveyed in the Malaysian context. This outcome is presented in the following table.

.

Table 2: Channels of disinformation

SN	Category	Theme	Exemplary Quotes	Mentions (Count)
1	Facebook	Uploading Videos	A video uploaded by a Facebook user	3
		Sharing	Shared fake news via Facebook	2
		Posting	For allegedly posting fake news…on Facebook	8
2	WhatsApp	Circulating	CID is also investigating the spread of fake news via WhatsApp	3
		Sharing	…shared via WhatsApp	1
		Posting	[posted fake news] through WhatsApp chat groups	4
3	Twitter	Uploading Videos/Photos	[uploaded fake news…on Twitter	3
		Sharing	For allegedly sharing fake content…on Twitter	2
4	Websites	Statement from Website Owner	The statement of My Media website owner	1

As presented in Table 2, disinformation is conveyed through different platforms, such as Facebook, WhatsApp, Twitter, and Websites. The outcome also suggests that Facebook and WhatsApp are the most commonly-mentioned platforms for spreading disinformation. The emerging themes reveal that disinformation is conveyed on social media in various forms, including posting, circulating, sharing, and uploading videos. Specifically, Facebook posting represents the most commonly mentioned disinformation case, followed by WhatsApp posting. For instance, the *New Straits Times* reported on January 28, 2020, "The second case involved several statements regarding the virus that were posted on the Facebook account". Likewise, the *Malay Mail* mentioned on August 10, 2020, "the woman was alleged to have posted a status on her Facebook account". The same newspaper also reported on April 20, 2020, "A food deliveryman was fined…for posting fake news on his WhatsApp application".

DISCUSSION

The findings reported in this study revealed several points that need further discussion. For instance, various individuals of distinct professions, including middle and low-income earners, are involved in spreading disinformation within the Malaysian context. The findings suggest that the spread of disinformation could be unintentional, perhaps due to a lack of media literacy. This outcome concurs with the theoretical assumption of the sociotechnical model of media effects that media impact is shaped not only by technology but also by the social context in which information is created and conveyed. The spread of disinformation is a complex outcome of the interrelations between technology and human action. This presumption underscores the significance of addressing disinformation from both social and technological perspectives. This is because the sociotechnical model of media effects emphasizes the critical role of various agents in creating and disseminating messages (Marwick, 2018).

The cases involving individuals with different sorts of professions in various locations imply that disinformation is a nationally widespread issue in Malaysia, which suggests the need for a multifaceted approach to addressing disinformation in the Malaysian context. Similarly, references to the arrests and charges against various agents of disinformation suggest that measures are taken by relevant authorities to a certain extent. This outcome also shows that agents of disinformation are faced with legal consequences. Also, the involvement of foreigners underscores the need for cross-border collaboration to address disinformation.

Moreover, the findings also revealed that disinformation is conveyed through different social media and online platforms. This outcome concurs with the findings of previous studies (e.g. Boberg et al., 2020; Shu, 2023). This kind of disinformation is likely to cause social tension or psychological stress (Bikbov & Bikbov, 2020; Boberg et al., 2020; Nicomedes & Avila, 2020; Shahzad et al., 2023), which can affect different facets of life, including educational, health, and economic aspects (Bikbov & Bikbov, 2020; Nicomedes & Avila, 2020). Additionally, references to Facebook, WhatsApp, and Twitter signify the critical role of social media in spreading disinformation within the Malaysian context. This outcome also indicates that disinformation is more likely to be conveyed via social media compared with traditional media outlets.

Additionally, the use of social media and online platforms to convey disinformation suggests that Malaysian society is highly connected online. This connectivity may augment the prevalence of disinformation due to the ease of sharing and access to social media platforms. In this context, the spread of disinformation in Malaysia can be attributed to a network of influences that suggests an interaction between individuals, technology, and society, which echoes the assumption of the sociotechnical model of media effects. Nevertheless, the ability to detect different ways of spreading disinformation, including posting, sharing content, group chats, and video uploads, suggests the authority's use of diverse techniques. Yet, the use of different platforms among the agents of disinformation indicates that this phenomenon requires ongoing efforts that involve public awareness, fact-checking, and legal action.

CONCLUSION

This study investigated the agents responsible for spreading disinformation and the channels through which disinformation is conveyed in the Malaysian context. The findings revealed that disinformation is a complex issue in the country, involving individuals from diverse professional backgrounds. This outcome indicates a need for effective awareness campaigns about the danger of spreading disinformation and underscores the significance of media literacy for individuals across different professions. There is a need for a comprehensive approach that includes education, awareness, and legal actions to address disinformation in the country. The findings also suggest that agents of disinformation are more likely to be identified by their professions rather than age or gender in the Malaysian context. For channels of disinformation, Facebook represents the dominant theme, followed by WhatsApp, Twitter, and websites.

This study collects empirical evidence regarding the agents and channels of disinformation from electronic media reports in the Malaysian context. It is hoped that the findings of this study could supplement the government's efforts to curtail disinformation and contribute to a successful media campaign to create awareness and increase public knowledge about the consequences of disinformation. However, this study is limited to investigating the agents and channels of disinformation through a qualitative content analysis of a few online newspapers. Thus, further research could investigate different variables, such as the age and gender of the disinformation agents, and explore legal actions to yield more comprehensive and representative outcomes. Additionally, quantitative research may investigate public awareness of disinformation in the Malaysian context.

AUTHOR CONTRIBUTION

Isyaku Hassan conducted the data analysis and authored the manuscript. Mohd Nazri Latiff Azmi contributed to data collection and provided critical revisions and editing.

ACKNOWLEDGEMENT

The authors of this paper would like to thank the Qualitative Research Association of Malaysia (QRAM) for funding this research project and the Universiti Malaysia Terengganu (UMT) for their support and cooperation.

DECLARATION OF STATEMENT

This manuscript represents original work by the authors and has not been submitted or published elsewhere.

CONFLICT OF INTEREST STATEMENT

The authors have no conflicts of interest to disclose.

REFERENCES

Ahsan, M. H., Ayub, N., & Azman, N. S. (2021). Digital literacy in Malaysia: A systematic literature review on methodological approaches. *Malaysian Journal of Qualitative Research, 7*(1), 107-125.

Albahar, M. (2021). A hybrid model for fake news detection: Leveraging news content and user comments in fake news. *IET Information Security*, *15*(2), 169-177.

Aldwairi, M., & Alwahedi, A. (2018). Detecting Fake News in Social Media Networks. *Procedia Computer Science, 141*, 215-222. doi:10.1016/j.procs.2018.10.171 Ashraf, N., Butt, S., Sidorov, G., & Gelbukh, A. (2021). CIC at checkthat! 2021: Fake news detection using machine learning and data augmentation. In *CLEF, 2021– Conference and Labs of the Evaluation Forum*.

AsiaGlobal Online (2018). A. *Anti-Fake News Remedies Worse than the Disease in Asia.* Retrieved from: https://www.asiaglobalonline.hku.hk/anti-fake-news-remedies- worse-than-the-disease-in-asia/

Bikbov, B., & Bikbov, A. (2020). *Communication on COVID-19 to the community– measures to prevent a second wave of the epidemic.* Retrieved from: https://osf.io/preprints/socarxiv/ea9jm/

Boberg, S., Quandt, T., Schatto-Eckrodt, T., & Frischlich, L. (2020). *Pandemic populism:Facebook pages of alternative news media and the coronavirus crisis--A computationalcontent analysis.* Retrieved from: https://arxiv.org/abs/2004.02566

Brennen, J. S., Simon, F. M., Howard, P. N., & Nielsen, R. K. (2020). *Types, sources, and claims of COVID-19 misinformation* (Doctoral dissertation): Oxford: University of Oxford

Chen, B., Chen, B., Gao, D., Chen, Q., Huo, C., Meng, X., ... & Zhou, Y. (2021, February). Transformer-based language model fine-tuning methods for COVID-19 fake news detection. In *International Workshop on Combating Online Hostile Posts in Regional Languages during Emergency Situation* (pp. 83-92). Springer, Cham.

Chen, H., Huang, X., & Li, Z. (2022). A content analysis of Chinese news coverage on Covid-19 and tourism. *Current Issues in Tourism*, *25*(2), 198-205. doi: 10.1080/13683500.2020.1763269

Choudhary, A., & Arora, A. (2021). Linguistic feature-based learning model for fake news detection and classification. *Expert Systems with Applications*, *169*(1), 1- 26. doi: 10.1016/j.eswa.2020.114171

Chung, D. S. (2008). Interactive features of online newspapers: Identifying patterns and predicting use of engaged readers. *Journal of Computer-Mediated Communication, 13*(3), 658-679. doi: 10.1111/j.1083-6101.2008.00414.x

Clark, V. L. P., & Creswell, J. W. (2008). *The mixed methods reader*. London: Sage Publications.

Cohen, L., Manion, L., & Morrison, K. (2002). *Research methods in education*. London:Routledge.

Creswell, J. W. (2012). *Research design: Qualitative, quantitative and mixed methods approaches* (2nd ed.). London: Sage Publications.

Cuan-Baltazar, J. Y., Muñoz-Perez, M. J., Robledo-Vega, C., Pérez-Zepeda, M. F., & Soto-Vega, E. (2020). Misinformation of COVID-19 on the internet: An infodemiology study. *JMIR public health and surveillance*, *6*(2), e18444.doi: doi:10.2196/18444

Dumitrache, C. G., Rubio, L., & Cordón-Pozo, E. (2019). Successful aging in Spanish older adults: the role of psychosocial resources. *International psychogeriatrics*, *31*(2), 181-191.doi: 10.1017/S1041610218000388

Finneman, T., & Thomas, R. J. (2018). A family of falsehoods: Deception, media hoaxesand fake news. *Newspaper Research Journal*, *39*(3), 350-361.doi: 10.1177/0739532918796228

Freelon, D., & Wells, C. (2020). Disinformation as political communication. *Political Communication*, *37*(2), 145-156.doi: 10.1080/10584609.2020.1723755

Hassan, I., & Azmi, M. N. L. (2019). Visual framing of Islam in online newspapers: Evidence from selected Muslim-majority nations. *Humanities & Social Sciences Reviews*, *7*(6), 1134-1141.doi: 10.18510/hssr.2019.76162

Hassan, I., Azmi, M. N. L., & Abdullahi, A. M. (2020). Evaluating the Spread of Fake News and Its Detection Techniques on Social Networking Sites. *RomanianJournal of Communication and Public Relations*, 22(1), 111-125.

Hassan, I., Musa, R. M., Azmi, M. N. L., Abdullah, M. R., & Abdullah, A. T. H. (2020).News reporting of injury prevalence in football: A study of selected Nigerian online newspapers. *Media Watch*, *11*(2), 323-336.

Hassan, I., Musa, R. M., Azmi, M. N. L., Abdullah, M. R., & Balogun, A. D. (2022). Exploring Denial Strategies against Climate Change across Agents and Media Platforms. *Online Journal of Communication and Media Technologies*, *12*(4), 1-8. doi: 10.30935/ojcmt/12240

Hassan, I.; Azmi, M.N.L. (2018). Readers' preferences for print and online newspapers in Northwestern Nigeria (2018). *International Journal of Academic Research in Business and Social Sciences, 9* (6), 965-974. doi:10.6007/ijarbss/v8-i6/4294

Hsieh, H. F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis.*Qualitative Health Research, 15*(9), 1277-1288.doi: 10.1177/1049732305276687 Ioannidis, J. P. (2020). Coronavirus disease 2019: the harms of exaggerated informationand non-evidence-based measures. *European Journal of Clinical Investigation*, *50*(4).1-5. doi: 10.1111/eci.13222

Iyengar, S., Peters, M. D., & Kinder, D. R. (2004). Experimental Demonstrations of the"Not-Not-So-Minimal" Consequences of Television News Programs. *In Political Psychology* (pp. 139-149). Hove: Psychology Press.

Jorgensen, K.W., Williams, A., & Hintz, A. (2018). Changing relationships between news organizations and audiences. *Digital Journalism, 6*(8), 945-950. doi:10.1080/21670811.2018.1505439

Kouzy, R., Abi Jaoude, J., Kraitem, A., El Alam, M. B., Karam, B., Adib, E., ... & Baddour, K. (2020). Coronavirus goes viral: quantifying the COVID-19 misinformation epidemic on Twitter. *Cureus, 12*(3).e7255.doi:10.7759/cureus.7255

Kuo, R., & Marwick, A. (2021). Critical disinformation studies: History, power, and politics. *Harvard Kennedy School Misinformation Review, 2*(4), 1- 11, doi:https://doi.org/10.37016/mr-2020-76

Marwick, A. E. (2018). Why do people share fake news? A sociotechnical model of mediaeffects. *Georgetown Law Technology Review, 2*(3), 474–512

McCombs, M. E., & Shaw, D. L. (1972). The agenda-setting function of mass media. *Public Opinion Quarterly, 36*(2), 176-187.doi: 10.1086/267990

Mian, A., & Khan, S. (2020). Coronavirus: the spread of misinformation. *BMC medicine*, *18*(1), 1-2.doi: 10.1186/s12916-020-01556-3

New Straits Times (2020, November 16). *Malaysia to discuss the revival of the Anti-Fake News Act in Parliament*. https://www.straitstimes.com/asia/se-asia/malaysia-to-discuss-the-revival-of-anti-fake-news-act-at-parliament

Nicomedes, C. J. C., & Avila, R. M. A. (2020). An analysis of the panic during the COVID-19 pandemic through an online form. *Journal of Affective Disorders, 276*(1), 14- 22.doi: 10.1016/j.jad.2020.06.046

Oleinik, A. (2011). Mixing quantitative and qualitative content analysis: Triangulation atwork. *Quality & Quantity, 45*(4), 859-873.

Othman, S. S., Hassan, F., Sabri, S. A., & Nayan, L. M. (2020). Fake News from TheIslamic Perspective. *MIMBAR: Jurnal Sosial dan Pembangunan*, *36*(1), 159-168.

Pulido, C. M., Villarejo-Carballido, B., Redondo-Sama, G., & Gómez, A. (2020).COVID-19 infodemic: More retweets for science-based information on coronavirus than for false information. *International sociology*, *35*(4), 377-392. doi: 10.1177/0268580920914755

Reis, J. C., Correia, A., Murai, F., Veloso, A., Benevenuto, F., & Cambria, E. (2019). Supervised Learning for Fake News Detection. *IEEE Intelligent Systems*, *34*(2), 76-81. doi: 10.1109/MIS.2019.2899143

Rodrigues, U. M., & Xu, J. (2020). Regulation of COVID-19 fake news infodemic in China and India. *Media International Australia, 177*(1), 125-131.doi: 10.1177/1329878X20948202

Rodriguez-Morales, A. J., Cardona-Ospina, J. A., Gutiérrez-Ocampo, E., Villamizar- Peña, R., Holguin-Rivera, Y., Escalera-Antezana, J. P., ... & Sah, R. (2020). Clinical, laboratory and imaging features of COVID-19: A systematic review andmeta-analysis. *Travel medicine and infectious disease*, *34*(1), 1-13. doi: 10.1016/j.tmaid.2020.101623

See, K. C., Liew, S. M., Ng, D. C., Chew, E. L., Khoo, E. M., Sam, C. H., ... & Ibrahim, H. (2020). COVID-19: four paediatric cases in Malaysia. *International Journal ofInfectious Diseases, 94*(1), 125-127. doi: 10.1016/j.ijid.2020.03.049

Shahzad, K., Khan, S. A., Iqbal, A., Shabbir, O., & Latif, M. (2023). Determinants of fake news diffusion on social media: a systematic literature review. *Global Knowledge, Memory, and Communication*. Retrieved from: 10.1108/GKMC-06-2023-0189/full/html

Sharma, K., Qian, F., Jiang, H., Ruchansky, N., Zhang, M., & Liu, Y. (2019). Combatingfake news: A survey on identification and mitigation techniques. *ACMTransactions on Intelligent Systems and Technology (TIST)*, *10*(3), 1- 42. doi:10.1145/3305260

Shu, K. (2023, June). Combating disinformation on social media and its challenges: a computational perspective. In *Proceedings of the AAAI Conference on Artificial Intelligence* (Vol. 37, No. 13, pp. 15454-15454).

Sink, A., & Mastro, D. (2017). Depictions of gender on primetime television: A quantitative content analysis. *Mass Communication and Society*, *20*(1), 3-22. doi:10.1080/15205436.2016.1212243

Stanley, M. L., Barr, N., Peters, K., & Seli, P. (2021). Analytic thinking predicts hoax beliefs and helping behaviors in response to the COVID-19 pandemic. *Thinking & Reasoning*, *27*(3), 464-477. doi: 10.1080/13546783.2020.1813806

Tandoc Jr, E. C., Lim, Z. W., & Ling, R. (2018). Defining "fake news" A typology of scholarly definitions. *Digital Journalism*, *6*(2), 137-153. doi: 10.1080/21670811.2017.1360143

Top 20 newspapers in Malaysia by online reach - MEDIAPOD [SNIPPET] (2024). Retrieved from https://www.mediapod.co/blog/top-newspapers-malaysia-online-reach/

Wang, W. Y. (2017). Liar, liar pants on fire: A new benchmark dataset for fake news detection. *Proceedings of the 55th Annual Meeting of the Association for Computational Linguistics* (pp. 422–426). Vancouver, Canada.

Wardle, C., & Derakhshan, H. (2018). *Thinking about 'information disorder': formats of misinformation, disinformation, and mal-information. Ireton, Cherilyn; Posetti, Julie. Journalism,'fake news'& disinformation*. Paris: Unesco.

Weaver, D. H. (2007). Thoughts on agenda setting, framing, and priming. *Journal of Communication, 57*(1), 142-147. doi: 10.1111/j.1460-2466.2006.00333.x

Wimmer, R. D., & Dominick, J. R. (2013). *Mass media research*. Boston: Cengage learning.

Zhang, J., Cui, L., Fu, Y., & Gouza, F. B. (2018). Fake news detection with deep diffusivenetwork model. Retrieved from: arXiv preprint arXiv:1805.08751.

Zhou, X., Zafarani, R., Shu, K., & Liu, H. (2019). Fake News: Fundamental Theories, Detection Strategies and Challenges. *Proceedings of the Twelfth ACM International Conference on Web Search and Data Mining* (pp. 836-837). Melbourne, Australia.

Zulhafizsyam, W. M., & Sulaiman, N. I. S. (2022). Social Media Users' Understanding of Fake News Detection and Validation Tools. *Malaysian Journal of Qualitative Research, 8*(1), 69-82.