**Mapping Disinformation During the Covid-19 Pandemic in Indonesia: A Qualitative Content Analysis**

**(in English)**

**Pemetaan Disinformasi Selama Pandemi Covid-19 di Indonesia: Analisis Isi Kualitatif**

**(in Bahasa)**

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***Abstract***

*During a life-threatening situation like the Covid-19 pandemic, disinformation spreads widely. While people project their affective aspect in understanding the situation, their fear of Covid-19 disrupts their logical and sound judgment toward disinformation. Less credible information like rumors becomes reliable for few people. This research aims at mapping the categories of disinformation based on the Kominfo report from January to March 2020. There were 359 hoaxes with five categories and 30 sub-categories. The research employed a quantitative as well as a qualitative content analysis as a method. The 359 hoaxes were categorized, coded, and interpreted according to the categories. The research findings disclosed that most disinformation people were the people concerned about each other (157, 52.2%). The majority of the hoax context related to health (234, 65.2%). Facebook (142, 39.6%) and WhatsApp (122, 34%) were the main hoax distribution platforms. Many hoaxes mentioned names of places, buildings, and other venues in local settings (157, 43.7%). Finally, the majority of the disinformation spread dread rumors (241, 67.1%).*

***Keywords****: disinformation, Covid-19, qualitative, content analysis*

***Abstrak***

*Selama situasi yang mengancam jiwa seperti pandemi Covid-19, disinformasi menyebar luas. Sementara orang memproyeksikan aspek afektif mereka dalam memahami situasi, ketakutan mereka terhadap Covid-19 mengganggu penilaian logis dan masuk akal mereka terhadap disinformasi. Informasi yang kurang kredibel seperti rumor menjadi dapat diandalkan untuk beberapa orang. Penelitian ini bertujuan untuk memetakan kategori disinformasi berdasarkan laporan Kominfo dari Januari hingga Maret 2020. Terdapat 359 hoax dengan 5 kategori dan 30 sub kategori. Penelitian ini menggunakan analisis isi kuantitatif dan kualitatif sebagai metode. 359 hoax dikategorikan, diberi kode, dan diinterpretasikan sesuai dengan kategorinya. Hasil penelitian mengungkapkan bahwa sebagian besar disinformasi adalah orang-orang yang sangat peduli satu sama lain (157, 52,2%). Sebagian besar konteks hoax terkait kesehatan (234, 65,2%). Facebook (142, 39.6%) dan WhatsApp (122, 34%) adalah platform utama penyebaran hoax. Banyak dari hoax yang menyebutkan nama tempat, bangunan, dan tempat lain dalam pengaturan lokal (157, 43,7%). Akhirnya, mayoritas disinformasi menyebarkan desas-desus yang menakutkan (241, 67,1%).*

***Kata Kunci****: disinformasi, Covid-19, kualitatif, analisis konten*

**Introduction**

Based on research results from Freelon et al. (2020) show that the appearance of disinformation and propaganda on social media has attracted the public. Disinformation had existed since 1946, where Allport and Postman (1946) in Pulford (2019) explained that rumor travels when events are important in individuals' lives and when the news received about them is either lacking subjectively ambiguous. Subjectively ambiguous reminds and reflects our current Covid-19 pandemic. According to Ali (2020), everyone was scared and worried about their own life. While in the meantime, Covid-19 news was ambiguous and made sense of rumor. On the other side, Scherr et al. (2021) show the vague news impacts negative information. In our contemporary digital world, we call this misleading news disinformation(Arthur, 2017). We can discern the confusion of news consumption that happened in World War I is repeated today. It is indeed relevant to our present Covid-19 pandemic(Viswanath, Lee, & Pinnamaneni, 2020).

Rumors *en masse* are challenging to handle or prevent. Social media platforms like Twitter consider themselves aggregators of information such as disinformation in the Taliban's war propaganda(Bahar, 2020). Unfortunately, the prevalence of social media platforms has amplified the circulation and outreach of disinformation. Two core elements of social media, namely web 2.0 and user-generated content (UGC), complicate the information environment. The flow of UGC on the web foundation has so long supported the spread of information(Zajc, 2015). However, this mechanism approves disinformation circulation on the public timeline. Disinformation has affected many aspects of our life such as politic (Faris et al., 2017), law (Glaeser & Ujhelyi, 2010), health (Nyhan et al., 2013, and Chou et al., 2018), social life (on democracy see Kahne & Bowyer, 2017, and on technology (on sanction see Fried & Polyakova, 2018, and ethic see Christians et al., 2020).

While most users swamped themselves in the afore-mentioned types of disinformation, they were left in awe by pandemic rumors. In times of panic, when life matters most, words can become believable(Jamil & Appiah-Adjei, 2020). Research by Guo and Zhang (2020) that rumors travels during the time and individuals' lives are at stake. Guo (2020) explains that rumors may become conceivable when the news received about them and the on-going events are ambiguous. Therefore, half-baked news reporting gave prominence to the ambiguity(Koivisto, 2015). Thus, people seem incapable of comprehending the news.

Sunstein (2014) classifies the spreading mechanism, namely social cascades, and group polarization. Cascades mechanism ensues as people rely heavily on each other's thought and conduct. When one feels lacking information, people can approve the views of others. A social cascade could develop when a group of early movers or influencers, or bellwethers, express verbally or act physically to signal others to follow. The second mechanism, group polarization, relates to the homophily nature of groups. It is when like-minded people assemble. Once the group members conduct an in-depth discussion of rumors, they would believe it. Not to complicate the definition, either disinformation or rumors pose similar characters. Cummings and Kong (2019) verified that rumors and disinformation display and delivered malicious intentions to persuade people to misleading information.

Academics, governments and private sectors had disinformation in the SARS outbreak in 2003(Aaltola, 2012). They have failed to warn us of the disinformation circulation danger. One main factor is the presence of social media platforms and private group chats. They have been overrun by pandemic disinformation daily. At the same time, the public was left to understand and identify rumors by themselves. Financial and social constraints already burden the masses themselves. The chaotic and toxic social media landscape could lead people to give up thinking about and looking for facts. Society can be easily misled by make-believe information during the Covid-19 pandemic. Some actual events supported this proposition. On the other side, three 5G masts were set ablaze in some parts of the UK. The UK society believed that 5G frequency has been causing coronavirus (Warren, 2020). Likewise, In India, many people started to consume cow dung and urine. They believe these animal left-overs were an alternative cure to coronavirus, even cancer (Nath, 2020). Simultaneously, Indonesia's society got the disinformation through WhatsApp groups saying onion could cure Coronavirus or dates fruit may contain coronavirus from bats (Patrick, 2020).

Therefore, Indonesian face quite ample numbers of disinformation during the Covid-19 pandemic. Kominfo report (2020) detected and fact-checked more than almost 400 coronavirus-related hoaxes. The total of hoaxes news about Covid-19 numbers was collected from early January to the end of March 2020. It suggests that there were 6 to 7 hoaxes on average circulating daily during these three months. Alongside the distribution of these hoaxes, the public encounters confusion as well. With more than 150 million Internet users, they used 8 hours daily through their smartphones. Most Indonesian news or information sources come from YouTube, WhatsApp, and Facebook. (We Are Social, 2019). Most Indonesian attitudes and traits create particular concern because of the platforms mentioned earlier' unreliable news or information sources. Disinformation may spread even faster during the pandemic through social media. In line with the research of Mansur et al. (2021), the spread of fake news through social media because people do not understand the content of the news

Disinformation may be circulated when false information is consciously shared by someone to cause others harm(Krafft & Donovan, 2020). The sharer knows precisely the information is incorrect but intentionally share it regardless. At the same time, mal-information is when factual information is shared to cause damage. Such as someone has intentionally distributed the half-true information to the public to spark curiosity. On the other side, the interest usually focused on the private life behind the phenomena (Wardle & Derakhshan, 2017). Therefore, Bradshaw and Howard (2018) reported disinformation as part of computational propaganda in The Global Disinformation Order from Oxford Internet Institute. The countries covered in this report were 70 countries in 2019. In March 2019, on Presidential Election, 453 hoaxes were on average; there were 15 hoaxes daily (Kominfo, 2019). Since then, disinformation has become part of our social media life in Indonesia. During this Covid-19 pandemic, hoaxes in the form of rumors have widely spread on social media.

Based on previous research, researchers aim to map the distribution of disinformation related to the Covid-19 pandemic. Researchers are trying to find variations of disinformation from January to March 2020, according to the Kominfo clarification report. Furthermore, the researchers analyzed hoax content using content analysis techniques. Meanwhile, content analysis is carried out through rumors theory. The research question of this study is how to map disinformation related to the Covid-19 pandemic?

**Methodology**

This research is a literature review with the subject of a report from the Directorate General of Informatics Applications, Ministry of Communication and Informatics of the Republic of Indonesia with the title Hoax Issue Report in 2020. To map disinformation During the Covid-19, the researcher used qualitative content analysis(Schellekens, Dillen, Dewitte, & Dezutter, 2020). The analysis was carried out to examine current trends and patterns, namely the Covid-19 pandemic, as an empirical basis for monitoring shifts in public opinion. This analytical technique is useful and meaningful because it relies on coding and categorizing data related to disinformation in Covid-19 events. This research is based on the Ministry of Communication and Information of the Republic of Indonesia in 2020 regarding the hoax issue of the Covid-19. This study uses a qualitative descriptive method with a content analysis technique approach because the data to be studied requires a descriptive explanation. The following are the categories and sub-categories of analysis data:

Table 1. Categories and Sub-categories of The Data (Source: Kominfo (2020))

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No. | Categories | Sub-categories | Code | Meaning |
| 1. | What: The subject of the hoax's utterances or sentences. | People | PEP | A subject is a person. |
| Action | ACT | The subject is an activity or action. |
| Phenomenon | PHE | A subject is an event. |
| Place | PLA | The subject is a location or venue. |
| Medicine | MED | The subject is drugs or medical entities. |
| 2. | Who: The object or the things discussed in the hoax's utterances or sentences. | Figure | FIG | The object is common people or laymen. |
| Very Important Person | VIP | The object is a well-known figure. |
| Others | OTH | The object is discussed other than the things in the sub-categories. |
| Alternative Medicine | ALT | The object is an alternative cure or practice. |
| Public Places | PUB | The object is/are public places. |
| Commercial Places | COM | The object discussed is/are commercial venues. |
| Health Facilities | HFA | The objects discussed is/are health facilities. |
| Technology | TEC | The objects are technological tools, devices, and systems. |
| 3. | Context: The setting, meaning, and message of the hoax's utterances or sentences. | Health | HEA | The message of the hoax conveys health issues caused by Covid-19 |
| Security Measure | SEC | The meaning of the hoax conveys the action of preventing and resolving the Covid-19 spread. |
| Politics | POL | The meaning refers to political and legal issues to Covid-19 prevention action. |
| Racism | RAS | The setting and message of the hoax indicate racial prejudice. |
| 4. | Scope: The targeted place mentioned or implied in the hoax. | Local | LOC | The place mentioned or implied refers to local neighbourhood or district |
| International | INT | The place mentioned or implied refers to abroad countries and locations |
| National | NAT | The place mentioned or implied refers only to Indonesia. |
| Regional | REG | The place mentioned or implied refers to the province. |
| 5 | Media: The social media platform utilized | Facebook | FAB | The hoax distribution social media platform is Facebook. |
|  |  | WhatsApp | WHA | The hoax distribution social media platform is WhatsApp. |
|  |  | Twitter | TWI | The hoax distribution social media platform is Twitter. |
|  |  | Internet | NET | The hoax distribution platform is the Internet. |
|  |  | Instagram | IGM | The hoax distribution social media platform is Instagram. |
|  |  | YouTube | YOT | The hoax distribution social media platform is YouTube. |
| 6 | Rumors: Types of rumors implied in the hoax | Dread | DRE | The rumors implied in the hoax incites fear and uncertainty. |
|  |  | Wish | WSH | The rumors implied in the hoax incites optimism. |
|  |  | Wedge | WDG | The rumors implied in the hoax provokes conflict. |

This study did not determine the sample. The data requires interpretations related to the issues to be discussed in the problem formulation to find out the problems to be revealed. Researchers with thinking skills are carried out this data procurement activity, including knowledge, accuracy, and accuracy to obtain the required data. This study's data are presented by describing the sentences relevant to the problem being studied, namely the adjusted elements in table 1. The technique used in this research is a qualitative / non-statistical descriptive analysis technique, namely the presentation of data that is not in the form of numbers but descriptive explanations. The method used is the content analysis method because this study uses unstructured data. Qualitative content analysis has developed rigorous coding and analysis techniques to obtain validity and reliability(Lebed, 2019). Therefore, this study focuses on creating a bigger picture of the covid-19 phenomenon embedded in the context of the categories in table 1. conclusions can be drawn from the communicator, message or text, the situation around its creation, including the sociocultural background of the communication, and the effect of the news.

**Results and Discussion**

This research's results are during the Covid-19 pandemic the hoax mostly mentioned common people (165, 46%). While in the following position, there are action-related hoaxes (62, 17,3%). The gap between PEP and ACT could become an indication that Covid-19 rumors were directed to human-to-human infection. The rumors were elaborating mostly on suspected people contracting Covid-19 and the death toll from Covid-19. Simultaneously, the action-related rumors like social distancing, regional locking down, and rapid testing seemed to be the second priority. This phenomenon may relate to the continuum of emergency during a pandemic disaster. And then in line with Stanley et al. (2020) Covid-19-related hoaxes distribution mentioning people was clearly on the alert phase. The alert phase refers to how people and officials respond to the increase in pandemic cases. Thus, during this phase, the Covid-19 hoaxes prevailed and were widely distributed. For, human to human infection is the truth during this phase. Society was afraid, but some hoax purveyors spread dread by circulating false human-to-human infection claims through social media(Susilo, Yustitia, & Afifi, 2020). On the other side, society fear for their life from the Covid-19 virus, peculiar phenomena (PHE) were also visible (57, 15,9%). In this analysis, abnormal, mythical, or even illogical phenomena examples were:

1. A talking infant claiming egg could cure Covid-19 (348)
2. Allegedly mass burial of Covid-19 victims (347)
3. 5G bandwidth was the cause of Covid-19 spread (260)
4. Coronavirus was found on toilet tissue (206)
5. Some Chinese citizen converted to Islam as they were cured of Covid-19 (127)

These irrational messages circulating during the pandemic are no strange phenomena, this referring to what Ali (2020) call rationalizing rumors. During the pandemic, people's minds were positively charged and burdened with fear and worry. Irrational rumors were not there to be analyzed. Instead, these false claims become rationalization, even fascination for some people. Although indirectly related, hoaxes mentioning medicine (MED) had undergone rationalization (34, 9.5%). Some of the medicine hoaxes were rationalized as alternative cures. Data can be seen in table 2.

In comparison, table 3 shows the number of Covid-19 hoaxes related to the subject of sentences, speeches, and even pictures, which are high (157, 52%). More than half of the Covid-19 hoaxes were aimed at the general public than figures (58, 16.2%). They know their lives are also at stake during the pandemic. Society may share the belief in saving themselves during the alert phase rather than caring and focusing on figures, such as the President, artists, and religious figures.

Table 2. Numbers of Disinformation Based on What Category (Source: Research Document (2020))

|  |  |  |  |
| --- | --- | --- | --- |
| **No.** | **Code** | **Σn** | **%** |
|  | People (PEP) | 165 | 46 |
|  | Action (ACT | 62 | 17.3 |
|  | Phenomena (PHE) | 57 | 15.9 |
|  | Place (PLA) | 41 | 11.4 |
|  | Medicine (MED) | 34 | 9.5 |

Table 3. Numbers of Disinformation Based on Who Category (Source: Research Document (2020))

|  |  |  |  |
| --- | --- | --- | --- |
| No. | Code | Σn | % |
|  | Figures (FIG) | 157 | 52.2 |
|  | Very Important Person (VIP) | 58 | 16.2 |
|  | Others (OTH) | 38 | 12.6 |
|  | Alternative Medicine (ALT) | 32 | 10.6 |
|  | Public Place (PLA) | 30 | 10 |
|  | Commercial Place (COM) | 26 | 8.6 |
|  | Health Facilities (HFA) | 14 | 3.9 |
|  | Technology (TEC) | 4 | 1.1 |

Based on the content analysis results in table 4, most of the hoaxes contexts associated with Covid-19 were about health. This phenomenon was as expected. During a pandemic, people would seek health advice, information, and healthcare. The health-related context from the hoaxes were more than 60% (234). Though placed second, the context related to security measures (80, 22,3%) also indirectly related to health.

Table 4. Numbers of Disinformation Based on Context Category (Source: Research Document (2020))

|  |  |  |  |
| --- | --- | --- | --- |
| No. | Code | Σn | % |
|  | Health (HEA) | 234 | 65.2 |
|  | Security Measure (SEC) | 80 | 22.3 |
|  | Politics (POL) | 23 | 6.4 |
|  | Racism (RAS) | 22 | 6.1 |

Referring to table 4, the hoaxes from HEA and SEC are as follows:

Health-related

1. There was a suspect symptomatic individual in Kraton Batang Regional hospital (223)
2. Tom Hanks was confirmed dead after contracting the Covid-19 virus (216)
3. Daniel Radcliff had contracted coronavirus (192)
4. Coronavirus had been spreading in Jakarta because of pork consumption (175)
5. Wet tissue can replace your mask (155)

Security measures

1. The closure of Gianyar road in Bali (350)
2. Sukabumi region required a letter of health notice to enter (344)
3. The Pondok Indah Mall closure because one Covid suspect had entered it (333)
4. A market in Cianjur had to be closed because of Covid-19 (322)
5. Closure and disinfecting in a market in Madiun East Java (286)

Both health-related and security measure hoaxes eventually related to each other when someone has allegedly contracted Covid-19 while entering commercial venues. These places would soon be reported as having a closure or disinfection prevention by spraying disinfectant solution. While politically-laden and racist rumors also had something frequently apparent. The POL and RAS hoaxes' findings related to; 1) government policy and action; 2) and Chinese ethnicity accusation. Some examples are as follows: Prabowo has gone during the Coronavirus pandemic (309), the Indonesian Ministry of Foreign Affairs announced a lock-down action (277), The medicine that the President has purchased from China are dangerous (334), and Chinese tourists have been freely entered and doing transit flight in Indonesia (173).

Further, the majority of local scope hoaxes usually suggested closedown or disinfection spraying activities. The regional context rumors were 157 hoaxes or 43.7% among the 395 hoaxes. These local regions represented almost the entire Indonesian archipelago. For international scope rumors ranging from countries like China, India, Italy, Singapore, Australia, etc. (121, 33.7%). These countries usually have high reports on Covid-19 victims. Most of these international rumors have been contextualized linguistically to Bahasa Indonesia. In other words, they have been translated. Finally, in the third position, national-context hoaxes have also been circulating during the early stage of the Covid-19 pandemic in Indonesia (52, 14.5%).

Based on content analysis, there were two leading platforms rumors about Covid-19 spread. The first was through Facebook (142, 39.6%) and slightly lower was through WhatsApp (122, 34%). Both platforms hold almost 70% of the rumors distribution. Other platforms that had been detected to spread these rumors were Twitter (48, 13.4%), Internet or online news portal (27, 7.5%), Instagram (10, 2.8%), and YouTube (10, 2.8).

Regarding the numbers of disinformation based on rumors, more than half were about dread (67.1%) as the report of hoaxes tracking from Hoax Issue Report in 2020 used in this research was at the onset of the Covid-19 pandemic in Indonesia. Rumors conveying fear of Covid-19 contraction and even death were common from January to the end of March 2020. These were the months in which Covid-19 had been globally spread. And during these months also, many countries had been conducting many security measures to prevent Covid-19 infection. From the need to regulate social distancing, washing hands, using sanitary hand spray to regional lock-down was apparent. These activities would have indicted the fear of Covid-19 infarction.

Along with dread rumors, wishful (70, 19%) and wedge (48, 13.3%) rumors circulated in social media. Wishful rumors during the Covid-19 pandemic contained hope and dreams of remedial treatment and alternative medicine. While wedge rumors provoked or incite hate toward political preferences, religious belief, ethnicity, or character assassination. So those people who received this wedge rumor could feel angry or hate toward the person or things implied. Though both rumorss numbers were indistinct to dread rumors, either rumors were circulating to the shroud, even more, the toxic information ecosystem during Covid-19 pandemic.

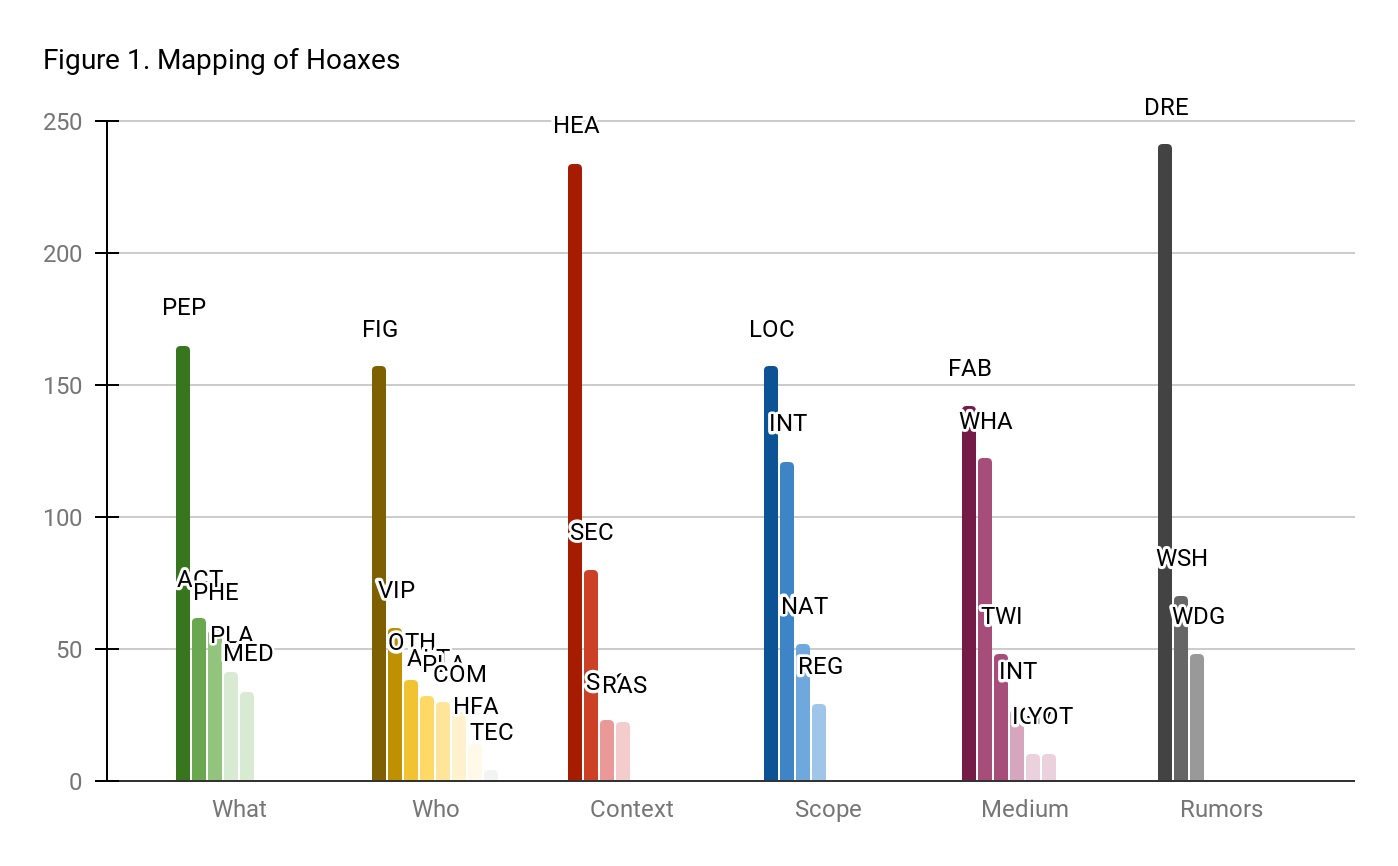


Figure 1. Mapping of Hoaxes (Source: Private Document, 2020)

Figure 1.shows 359 Covid-19 pandemic hoaxes in Indonesia from January to the end of March 2020 in each category. This mapping can convey the number of hoaxes for each category and sub-category during the three months of observation. The researchers concluded mapping hoax data during the Covid-19 pandemic in Indonesia because the most common hoaxes from the analysis from January to the end of March 2020 were about health issues targeting fear-mongering and implying the general public in local areas with Facebook and WhatsApp as a distribution platform. The second most common hoax of the analysis is alternative medicine and treatment for Covid-19 by implementing global and national security action activities regulated and influenced by key figures from the information distributed through various platforms. The least that can pose a potential danger are hoaxes that incite hatred and sentiment against political preferences, ethnicity and religious beliefs that threaten harmony at the regional level through various social media platforms.

This study's number of hoaxes cannot describe hoaxes' impact during the on-going pandemic in Indonesia. However, these numbers can give a glimpse into a situation where rumors or hoaxes are intoxicating the public social media timeline. So, this study's results are in line with Freelon (2020) that one of the potentials is to spread disinformation through social media.

Rumors that spread fear and uncertainty circulated massively, especially among the surrounding communities. This research also occurred in Indonesia and China and Russia, namely the spread of rumors online (Pulford, 2019). Social media platforms like Facebook and Twitter or group chat apps like WhatsApp contribute to scams' constant danger. The need to educate people with digital and media literacy is imperative. Lack of skills checks can lead to the way people recognize and distribute. Failure to understand information can also be the cause. Lack of critical thinking in education also tends to contribute to a lack of identification of information. During the Covid-19 pandemic, this phenomenon worsened, while the government and journalists were still struggling to verify and distribute reliable health information.

In addition, hoaxes related to Covid-19 do not only damage the timeline of public social media. They have also crept into people's minds with fear. It is in line with the research results from Viswanath, Lee, and Pinnamaneni (2020) that disinformation amid the Covid-19 pandemic can cause public distrust of the government, media, and even information about each other from various sources distributed on social media facilitated by users. Generated Contents. Meanwhile, the government and media also broadcast their version of Covid-19 information, as Allport and Portman (1946) in Pulford (2019) illustrate, rumors spread in large numbers when data is widely distributed. They show how rumors about the Pearl Harbor attack developed rapidly after the newspaper published the tragedy.

The fears implicit in the Covid-19 disinformation have projected people's emotional state because Allport and Portman pointed out that when people have less information about their environment, they fail to objectively and impartially understand any information. The misleading information on Covid-19 also shows this projection. People who fear that their lives will contract the coronavirus will fall easy prey to disinformation. During a pandemic, emergencies, while disinformation exacerbates the situation, have a more significant impact on society. The repercussions can include fear of the local situation, government regulations, and mistaken belief in alternative medicine and medicine.

**Conclusion**

This research has shown the demographics of disinformation during Covid-19 in Indonesia. The majority of hoax contexts are related to public concern for health (234.65.2%). These people are more concerned with each other or ordinary people (157, 52.2%) than important figures (58, 16.2%). Two main social media platforms are the medium, namely Facebook (142, 39.6%) and WhatsApp (122, 34%). The dominant number of hoaxes mentions or implies names of places, buildings and other places in local settings (157, 43.7%). Most of the disinformation spread rumors of fear or fear (241, 67.1%). The researchers suggest several recommendations in responding to the urgency of tackling disinformation during the Covid-19 pandemic in Indonesia and initiating digital and media literacy in Indonesia's national education system. The Indonesian government should cooperate and implement fact-checking practices with regional and local stakeholders, especially in rural areas. The local community must monitor, check the truth, and clarify misinformation that occurs in their community. Each local community from *Rukun Tetangga* (regional district), *Rukun Warga* (local community), and *Kelurahan* (sub-district) must organize fact-checking workshops for local residents. Future research is advisable to conduct more thorough, longitudinal, and comprehensive research on disinformation mapping during Covid-19. This research can provide a clearer picture of the government and the public about the spread of hoaxes during a pandemic.

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