ARTICLE (REFEREED)

When Accurate Information Harms People: Information on COVID-19 Infection Clusters in Japan

Hitoshi Kamada

Kyoto Notre Dame University, Japan

Corresponding author: Hitoshi Kamada, Kyoto Notre Dame University, 1 Shimogamo Minaminonogamicho, Sakyo Ward, Kyoto, 606-0847, Japan. hkamada@notredame.ac.jp

Abstract

The COVID-19 pandemic has triggered the generation of a large amount of information not just directly about the virus but also about its various societal impacts. This paper describes the atmosphere that the pandemic has created in the Japanese society and examines the information spread about infection clusters. Besides misinformation and disinformation, the paper highlights another problem in information dissemination during this pandemic. Regardless of the legitimate intention of reporting this type of information, people reacted by blaming or discriminating against those who were associated with clusters. The information on infection clusters has brought to the surface the privacy issues and has brought attention to emerging issues that concern information and media literacy. Understanding how people interact with information in a particular social or cultural setting, not just from an objective but also from an emotional perspective, becomes more important for enhancing people's information literacy.

Keywords

COVID-19; Pandemic; Information; Blame; Information Literacy

Introduction

The COVID-19 pandemic has affected every sphere of the society across the world. The foremost impact was the sheer number of people who died or suffered from the symptoms caused by the novel coronavirus. Medical practitioners who took on the duty of treating a large number of patients have been put into dire straits. Large scale lockdowns and many restrictions such as the closure of businesses, public institutions and schools have made a significant impact on the society in Japan and in other countries. People have been forced to change their lifestyle, and many have struggled with sustaining their livelihood. Amidst this uncertainty, people have sought a wide variety of information to understand what is going on and figure out what to do about this situation. People seek information to find answers, reduce uncertainty, or make sense of situations (Case & Given 2016, pp. 83-87). In this pandemic, people became emotionally engaged with information. This COVID-19 pandemic may be the first case of a large-scale pandemic in the information landscape where available information has become enormous (World Health Organization 2020). This is also the first large-scale pandemic in the information landscape where social media is abundant (Jaeger & Taylor 2021, p. 19). This pandemic has generated not just a sheer amount of information but also kinds of information that were not widely distributed in the past.

Widespread misinformation and disinformation in the current pandemic have highlighted the importance of health literacy among people. This situation has brought to the surface an increased need to understand people's information behavior pertaining to health information (Xie et al. 2020, p. 1421). Lawal and Bisto (2020, p. 231) identify health information literacy as one of the critical research areas for information literacy. While health information literacy draws attention prominently, the current pandemic has brought about a unique information environment that calls for increased attention to overall information or media literacy. Among a large amount of information disseminated during this pandemic, one kind of information had become widespread in Japan. Public and media disclosure of infection clusters, which was intended to alert the public to where clusters of infections were occurring, has caused adverse effects in Japan. This paper examines the issue that the information on infection clusters has surfaced in light of information ethics and analyzes it in the context of information literacy.

Information and Emerging Social Atmosphere during the Pandemic

Since the outbreak of COVID-19, various media such as broadcasting, newspapers, and the Internet have disseminated information about this previously unknown virus, including the nature of the virus, how it spreads, the severity of symptoms, and possible treatments and prevention. People have also shared this information. Information overload has become increasingly a significant issue in the information-heavy society (Savolainen 2007, pp. 611-612). Overabundance of information was already prevalent in the society. Then, all of sudden, people became inundated with and had to sift through this large amount of information generated by the pandemic.

The information contained differing messages as the society was uncertain about the new virus and its societal impact. The uncertain situation triggered the generation of misinformation, which is unintentional false information. This pandemic has also highlighted the recent issue of disinformation or fake news. Infodemics has become the word that characterizes the abundance of such information (World Health Organization 2020). In Japan, people reacted to the information that toilet paper rolls were disappearing from stores. A shortage of masks caused by the spread of the virus was falsely associated with a possible shortage of paper. TV broadcast scenes in stores where there were few or no toilet paper rolls. People inundated stores to purchase toilet rolls, even though media reported that this association was false and sufficient stock was available in the country. Media coverage of this situation played some role in accelerating people's reaction (Fukunaga 2020, p. 18). The country repeated the previous paper buying panic

during the oil shock in 1973, as people reacted to the rumor, or the actual situation of scarce supply realized by the rumor.

Toward spring 2020, the concern over the virus continued to increase in Japan. Mass media continued to report the increasing severity of the epidemic in and outside of Japan with daily counts of the number of infections and deaths. Media also began reporting infected cases among celebrities. A couple of celebrities died from the virus, which also added to the fear among people. In April, the national government declared a state of emergency. It requested the closing of businesses, schools, and public institutions as much as possible except for essential services. Over the course of the pandemic, the nature of the virus has gradually unfolded. One characteristic of this virus is that many of the infected people have no or mild symptoms (World Health Organization n.d.). People who get infected, but have no symptoms, move around and may possibly spread the virus to others. This has crystalized a message that you should behave as if you were infected; you should wear a mask, limit socializing and traveling around. This message has inundated the media, and people were exposed to this message every day.

Media reported on a survey of people from different nationalities by Japanese researchers. It found that the Japanese were less tolerant with those who got infected with this virus than people in other countries. The Japanese respondents tended to think that the people who got infected should be held responsible ('Shingata korona' 2020). This suggests that the Japanese may have a greater tendency to blame infected people, as they think that infected people should be held responsible for being careless by attending gatherings in events, parties or dining out. Also, people who travel have become a target for blame as they are considered potentially spreading the virus by traveling.

This tendency seems to come from the presence of strong peer pressure to conform to the societal or group norms in Japan. In Japan, many people voluntarily started to wear masks and followed newly emerged rules such as social distancing without strong enforcement. Even though the state of emergency declaration was not backed by legal power, most people complied. Social conformity is considered strong in Japan. (Kondo et al. 2010, p. 361). Miller and Kanazawa (2018, chapter 2) discuss that stronger attachment to groups in the Japanese society has fostered people's tendency toward conforming behavior. The pandemic has tightened this societal pressure to conform to social norms. This can arise from people's fear of getting isolated from the group they belong to (Isono 2020, pp. 63-64). As a result, people who do not seem to follow became the target for blame. One newspaper article mentioned this atmosphere with the headline, 'Japanese stew on feeling forced to social distance, wear a face mask (Kawashima 2020)'. This force may have been effective in slowing the spread of the virus, but it has stifled people.

A heavy dose of this message by mass media, while considered necessary to contain the spread of the virus, has created an atmosphere where some people consider those who got infected should be the ones to blame for not just getting themselves infected but also possibly spreading the virus. For example, children playing outside became a target for blaming during the time schools were closed (Manabe 2020, pp. 66-67). Some 'pachinko' parlors, which offer Japanese-style slot machine gambling games, continued to stay open during the state of emergency in spring 2020. The businesses that stayed open and their customers became the target of criticism and media attention as being irresponsible. This happened despite no reported infection clusters associated with pachinko parlor business during this time ('Why have no COVID-19 clusters' 2020).

Anxiety and fear in the society have made medical facilities and practitioners a target of defamation despite the fact that they are the frontline people who fight against this pandemic by treating people and saving people's life. Shimizu and Lin (2020) described this situation as follows:

> Healthcare facilities and HCWs [healthcare workers] were seen as epicenters, which triggered widespread irrational prejudice and discrimination against HCWs. They were denied use of public buses, taxis, and even urged to vacate rental housing (p. 1).

As this situation grew, the Japan Newspaper Publishers & Editors Association and the Japan Commercial Broadcasters Association jointly put forth a statement that any harmful act, such as defamation and discrimination, should not be tolerated and mass media should work toward avoiding prompting such acts ([Nihon Shinbun Kyōkai & Nihon Minkan Hōsō Renmei 2020](#)).

Information on Infection Clusters

During the pandemic, the word 'cluster' emerged as a keyword in Japan. A cluster is a location where a group of infected people were identified. The Japanese government took the strategy to follow up clusters to curtail the spread of the virus (['Govt looks for clusters to stop virus' 2020](#); [Amengual & Atsumi 2021](#)). The media began broadcasting a number of news stories about newly found clusters. Reacting to the information about clusters, some people discriminated against those people involved in clusters and began blaming people associated with clusters. They made phone calls, wrote defaming messages on paper and posted on buildings, or sent defaming messages on social media. Some people even attempted to track down the identity of the people associated with a cluster. A newspaper article was headlined, 'COVID-19 reports sparking boorish behavior in communities' (['COVID-19 reports' 2020](#)). Another newspaper article reported an early case of an infection cluster at a university and people's subsequent reaction (['univ. with infected students flooded with threats, slander' 2020](#)).

Blaming and discrimination went beyond those who actually got infected within a cluster. Other members of businesses or institutions were impacted. In government and media reporting, the information about the infected individuals is kept anonymous, with some limited information such as age categories. On the other hand, information about the institutions or businesses where clusters have occurred is protected less, since it is not about individuals' privacy. For example, an infection cluster was found in a university athletics team. After this was reported by media, some students at this university were prevented from working in part-time jobs or denied teaching internships at public schools. A newspaper editorial article about this incident was titled, 'people infected with coronavirus should not be subject to defamation' ('People infected' 2020). Some people demanded an apology from the university. A newspaper article reported that the mayor of the city where this university was located responded that the university should not be forced to make an apology (['University need not apologize' 2020](#)).

The students who were denied work and school teaching internships just happened to be the students at the same university and were not associated directly with the athletics club where the cluster of infections occurred. Further, the cluster infection happened during summer university recess. Regardless of no substantial risk that they might be infected, they received unfair treatment just because they were the students at the university. This is not fake news nor unsubstantiated rumors. It is factual, accurate information about where infections were occurring. This may be legitimate information to be reported for public health purposes. However, in a situation like this, it also functioned as hurting some people, not just giving psychological distress but actually causing tangible harm such as the denial of a teaching internship.

There has been so much information available during this pandemic. Among this large amount of information, people can see the information about where and how many people get infected in much more detail than before and people can act on such information. Other kinds of information can also have this function of causing people to blame others. News about public figures' misconduct can cause peoples' blaming reactions. People involved in criminal or socially undesirable conduct can become a target of such attacks when the news about such conduct comes out. In this case, the information on infection clusters during this pandemic made any ordinary individuals or groups a potential target of harassment, discrimination or attacks. They did not do anything wrong, just became infected or happened to be associated with clusters. Provision of information, in the ideal sense, should be for the good of society. During the pandemic, providing accurate information is important. However, this accurate information can

cause people harm. The information on infection clusters has highlighted the societal harm by the provision of accurate information, not just misinformation and disinformation. This effect has put even more strain on the society during the pandemic.

Cluster Information and Information Ethics

This pandemic has brought to the surface the issue of protecting individual privacy on several fronts. One aspect of the privacy issue was what individual data to collect when implementing a contact tracing system that attempts to capture people's whereabouts to follow-up infection spread. Fahey and Hino (2020, pp. 2-4) reviewed different approaches to treating individual privacy in developing tracing systems, from one end of approaches forcing collection of privacy information and the other putting more privacy protection on collecting individuals' data. This is one area where balancing public health needs to contain the epidemic and individual privacy has come to be an issue (Subbian et al. 2021, p. 186).

In reporting infection clusters, information about cluster locations, not the information about individuals, is disclosed. In such a case as a live concert cluster, the concert organizer and people who attended the event were susceptible to receiving blame from the public. This blaming may not be limited to a particular location identified as a cluster. For example, the night entertainment business in one district in Tokyo received media attention as infections were concentrated in the district. In this case, all the businesses in this area, not just particular venues, received criticism (Osaki 2020). Sometimes, clusters are temporal such as people gathered at a live concert, but they can be permanent groups or organizations. For example, the information on a hospital cluster carried the name of the hospital. It triggered public blaming on whoever belonged to that hospital (Denyer & Kashiwagi 2020). In another case, such as the aforementioned university athletics club cluster, the information about the cluster included the name of the university. People's reaction to the information on clusters extended to other members of the same group outside of the members involved in the cluster.

This situation invokes a concept that a group, not just individuals, can have privacy (Floridi 2017, pp. 97-99). Taylor, Floridi, and Van der Sloot (2017) discuss the importance of group privacy in the current networked environment where a large amount of data is available, shared, and used for various purposes. In the case of infection clusters, the privacy of groups is exposed when the information on a group is disclosed by media or public authorities. As a result, individual members of a group can become victims of blaming or discrimination. Besides the tangible harm done to some people, such as the students denied teaching internships, all members of the group might have suffered psychologically. Thus, the group as a whole could suffer, as a consequence of the information disclosure.

Japan's Ministry of Health and Labor put together the guidelines regarding information disclosure when an infectious disease classified as being in Class 1 occurs (Kōsei Rōdōshō Kenkōkyoku Kekkaku Kansenshōka, 2020) An official contact by the Ministry sent to regional health authorities stated that the information disclosure of coronavirus patients should consider the guidelines. According to this official contact, location information should be disclosed under the conditions set forth by the above guidelines, and it does not require consents of those who were involved. This document also underlines the need to protect personal information (Kōsei Rōdōshō Shingata Korona Uirusu Kansenshō Taisaku Suishin Honbu 2020). However, this document is not clear about the effects of disclosure of location information.

Decision on disclosing the information on clusters has been left to local governments. For example, Shizuoka City announced their own guidelines about when to disclose cluster information ('Dōi nakutemo' 2020). This newspaper article reported that more than 100 citizen requests were made to the city for disclosing cluster information in the past. Okinawa prefecture government had not disclosed past infection clusters, and a newspaper article reported it as an issue ('Okinawa' 2021). According to this article, the prefecture government had not yet established guidelines for disclosing cluster information but said that

the government had considered factors such as the types of groups, expected effects on curtailing the virus spread by information disclosure, and impact on privacy. Local governments recognize the negative effects by disclosing cluster information and at the same time are faced with public demand for information disclosure.

Xie et al. (2020) raise the need to protect privacy of people such as patients while information disclosure is important in the pandemic situation. They also discuss that information science should work 'against negative stereotypes and hostile behaviors toward innocent people who may not even have anything to do with the spread of the virus' (p. 1422). In this, they quoted hostility towards Chinese immigrants. The issues in information on infection clusters highlight the juxtaposition of these two issues; privacy versus public heath necessity of information disclosure and negative impacts suffered to people.

Information Literacy Implications

In the current digital age, various versions of literacies about information and media are advocated (Polizzi 2020, p. 2). These literacies have been considered increasingly important for people in current society where information, media, and technology tools are abundant (Koltay 2011, pp. 211-212). The library and information science profession has long advocated for information literacy, as a literacy that people should be equipped with. The American Library Association (n.d.) defines it as an individual's abilities to 'recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information'. Media education has also long advocated for media literacy. Media literacy is concerned with 'the ability to think, process, evaluate, understand, and produce the media in all forms' (De Abreu 2016, p. 9).

These information and media related literacies have been evolving as the information environment has become more complex. Reflecting this, a more recent definition of information literacy has been established as 'the set of integrated abilities encompassing the reflective discovery of information, the understanding of how information is produced and valued, and the use of information in creating new knowledge and participating ethically in communities of learning' (Association of College and Research Libraries 2015, p. 8). As different media have become more interrelated as digital information, the different literacies have also become interrelated. For example, Leaning (2017, pp. 3-4, 124-127) calls for more integration of information literacy and media literacy in education. He argues that critical evaluation of information should have more emphasis in information literacy (Leaning 2017, pp. 45-47). UNESCO's notion of media and information literacy recognizes this increasing interplay of these literacies in the current digital environment (UNESCO Institute for Information and Technologies in Education n.d.).

Evaluating information content or media messages calls for critical thinking (Cook 2018, chapter 4). In doing so, people's ability to understand the context within which information content is produced and received is increasingly considered important. In the past, when media and information producers were limited to authoritative mass media such as TV and publishing, evaluating information contents for credibility and accuracy was relatively straightforward, although of course information from traditional media is not always trustworthy. However, current society is inundated with a large amount of information produced on the Internet, not just by traditional media, but also by many different players including individuals. This has created an increased need for these literacy skills, especially in terms of evaluating information content critically. Recent problems of fake news have increased the focus on this issue.

Some advocate for situating information literacy into people's daily lives, such as leisure activities, beyond education and work-related settings where information literacy has been primarily concerned (Lawal & Bisto 2020, p. 237). When information literacy is situated in daily life, 'emphasis is given to information literacy for preparing life-long learning and informed citizens who can contribute toward a strong community and the overall well-being of the society' (Martzoukou & Sayaad Abdi 2017, p. 21). Information

on infection clusters and other issues such as fake news posed by this pandemic highlight the need for enhancing information and media literacy among people in their daily life. People use information for mundane daily activities but also for coping with critical situations such as illness and disasters. A pandemic can be one of these critical situations.

While critical thinking is important, this pandemic is posing difficulties in seeing information content critically. Widespread fear and uncertainty may blur their ability to examine information critically. History shows that people became susceptible to rumors and fake news when a large-scale societal disruption occurs. This pandemic has resulted in situations where people may react based on uncertain or misleading information, just like the aforementioned toilet paper incident in Japan. This has posed issues of how to encourage or sustain people's critical mindset toward information amidst the extraordinary situation caused by the pandemic. Unlike discerning fake news, the information about infection clusters is in itself accurate and legitimate information, when this type of information is evaluated in terms of the concepts of information and media literacy. The issue in this case is not about the information content but how people react to it. People's reaction to the information has caused harm. People's emotions play an important role in their behavior and understanding regarding information (Fourie & Julien 2014). Examining information content objectively in isolation of individuals and contexts may not sufficiently cover this aspect. Julien (2019, p. 27) points out the difficulty in making people see the context surrounding information, which challenges critical evaluation of information.

One recent movement emphasizes the importance of information literacy for civic engagement, since effective political participation requires accessibility to and appropriate use of information among people. Critical thinking once again plays a major role when people evaluate political information. Lenker (2016, p. 514) states that people are not always rational when consuming information as posited by Dervin (1994), suggesting that people may not view political information rationally. Baer (2020) discusses the need for critical information literacy that employs the concept of 'intellectual empathy'. It calls for empathetic aspects in critical thinking, not just objective aspects. The need for an empathetic attitude is emphasized when interacting with political information, where the viewpoint may not be in agreement with one's own (pp. 54-58). Although Lenker's and Baer's discussions focus on how people process political information, this introduces the importance of paying attention to emotional aspects when people receive information. Information on infection clusters is posing a similar issue of how people react to information emotionally. It poses a challenge for information literacy education with regard to how it can help people see the context in which certain information is disseminated. Seeing the context helps increasing the ability to reflect on their reactions with an empathetic mindset toward other people that are involved in this information.

With regard to ethical aspects in information literacy, Bawden and Robinson (2020) examine the possible incorporation of the concept of privacy as proposed by Floridi into information literacy. In reviewing existing information literacy frameworks, they indicate that more recent frameworks increasingly deal with ethical aspects of information literacy. Among these recent frameworks, a framework known as metaliteracy deals with privacy issues prominently. In metaliteracy, privacy is listed as one of the elements that people should be aware of when interacting with information. These literacy frameworks may not yet treat privacy of groups but there is a potential for incorporation (Bawden & Robinson 2020, pp. 1039-1040). Metaliteracy not only covers traditional information literacy aspects such as evaluating information but also deals with other aspects of literacy required for sharing information in online environments (Mackay & Jacobson 2014, p. 1). This is especially important in the current environment where more and more information about people becomes available, and people can more easily produce and spread information that might affect privacy. When they share or react to information, such as the information on infection clusters, helping them consider possible consequences to others has become an important aspect of information literacy.

Okan et al. (2020, p. 11) raise a concern about adverse consequences if people do not have high trust in health information, especially during the current pandemic when information is abundant and may contain misinformation and disinformation. While increasing people's health literacy is important, information providers such as governments, health authorities, and media have to send trustworthy, effective messages to the public (Okan et al. 2020, p. 13). Information literacy education including health literacy is long-term effort and may not be able to address immediate information issues. Information producers' effort at effective information dissemination should consider the current situation where there is information overload and fear and anxiety are prevalent. Wahl-Jorgensen (2020, p.2), in the preface to the Japanese translation of her book, states that media coverage about the COVID-19 pandemic has reflected emotions caused by the pandemic. The sensational tone was especially evident in the early stage of the pandemic, as she noted in the article published in February 2000 (Wahl-Jorgensen 2020a). This poses an information literacy challenge, when people attempt to make sense of such information in this extraordinary situation. Besides critical, objective evaluation of information, awareness of emotions in both information content and people themselves should draw more attention in an attempt to understand what information is disseminated and how people interact with information.

Despite this issue, mass media and public media campaigns have a significant role as a more immediate means of remedying this situation characterized by the information on infection clusters. Public campaigns have started at both national and local levels against this phenomenon of defaming people associated with the virus. As the Ministry of Justice in Japan states, it is against human rights (Hōmushō n.d.). One incident in Japan characterized people's attitudes towards the infection spread that called for a public intervention. Iwate Prefecture had no case of infection for the longest time since the beginning of the virus outbreak in Japan. The governor of Iwate Prefecture had to make announcements that the first new patient in the prefecture should not be blamed, even before the first case was finally reported ('Iwate, with no virus cases' 2020). In this relatively less populous region, a strong pressure not to have the first case had formed among people. Residents became overly protective against any activity or people's movement that might bring the virus into the region, which necessitated the governor's statement.

This pandemic has resurfaced the importance of designing effective public communication campaigns. However, public media campaigns are not always effective in getting the message across to people. This has been a long-acknowledged issue (Dervin & Frenette 2003, p. 234). Especially in this pandemic situation, protecting oneself takes priority and a fear of catching the virus is widely spread among people, so that people may not readily accept the message by public media campaigns against defaming those who are infected or are potentially close to the virus. Formal information channels are not always effective for fulfilling people's information needs such as to how deal with life situations, and informal, personal information is considered valuable to them (Martzoukou & Sayyad Abdi 2017, pp. 33-34). This turns attention to how informal information sources can be treated in understanding and enhancing people's information literacy. Affective aspects of informal information can play an important role in bringing about restrained reaction to information among people during a situation like this pandemic.

Regarding the information on infection clusters, people have also shown support and compassion towards others such as those who were involved in infections. For example, the Shizuoka Shinbun newspaper reported discriminatory treatments made to workers and their family members when their company was reported as a cluster ('Shizuoka' 2020). According to the article, while they were not allowed to visit local clinics and their children were not permitted to go to school, the company received supportive messages from some people. Local communities also showed support. When a Starbucks café temporarily closed due to an infection case, some customers wrote supporting messages on the closure announcement placed on the entrance door ('Sutaba' 2020).

Despite some people showing negative reactions on social media, it is also a place where people post supporting messages to those who became infected. Encouraging broader dissemination of these positive,

supportive messages may counteract the negative reactions some people post. Research and practices in information literacy have a potential for enhancing this situation. Local communities and social media can be a place to facilitate either blaming people or supporting people during a situation like this pandemic. What information is disseminated and how in both local communities and the Internet become important in moving society in the right direction to steer through this pandemic. Information literacy can play a role as it is also increasingly concerned with people creating and sharing information for the good of themselves and for the society.

Miller and Kanazawa (2018, chapter 9) posit that the social structure in Japan that induces people to conform to group norms have fostered people's low trust of other people, since the affiliation with groups gives protection and reduces the necessity to trust others. This can provide a possible explanation about the way people behaved when seeing information about other people getting infected. Hoechsmann & Poyntz (2012, p. 140), in discussing emerging literacies, state that any literacies from past to present are bound by societal situations or relationships and the way people make meaning differs by societal settings. Thus, information literacy education should recognize the influence of social and cultural situations (Montiel-Overall 2007, p. 53). The issue that this paper has considered shows the importance of seeing societal or cultural contexts in people's interaction with information.

Conclusion

The current COVID-19 pandemic has generated a large amount of information not just about the spread of the virus but about other various impacts it has made on the society. In Japan, one segment of this huge array of information was the reporting on cluster infections. Wide dissemination of this information through media has added to the problem that people who became infected or were associated with clusters became the target of blaming and discrimination by other people. This situation has highlighted the unique instance that correct and legitimate information can have a function of harming a large number of ordinary people. During previous large-scale pandemics in history, this type of information was not widely disseminated. However, the current information environment produces a far greater amount of information. This environment also provides many people with opportunities to spread information and post their reactions on the Internet.

The incidents caused by the information on infection clusters have brought to the surface the issues of privacy and people's reaction to such information, which can be influenced by societal conditions. As information literacy, which is now more interrelated with other literacies such as media literacy, has become situated with people's daily lives interacting with information, critical understanding of information among people has become more important. Anxiety and fear during the pandemic have produced a unique context in which people deal with such information. The dissemination of information on infection clusters sheds light on the privacy aspect of information literacy and the need to examine emotional aspects of people's interaction with information, as shown in recent information literacy movements.

Further, this pandemic has reinforced the need to devise effective and appropriate dissemination of information in order to minimize adverse societal effects amidst of fear and anxiety among people. Understanding how people may react to information and conveying messages through putting them in appropriate context, which is also influenced by cultural and societal settings, become increasingly important. As more people participate in disseminating information in current society, the importance of information literacy for producing and sharing information becomes increasingly evident. Not only disseminating accurate information, but helping people understand information and communicate about it appropriately becomes crucial in order to live through a situation like this pandemic in a less devastating manner.

Acknowledgements

References

Amengual, O. & Atsumi, T. 2021, 'COVID-19 pandemic in Japan', *Rheumatology International*, vol. 41, pp. 1-5, https://doi.org/10.1007/s00296-020-04744-9

American Library Association n.d., *Information Literacy*. Accessed 7 December 2020, https://literacy.ala.org/information-literacy/

Association of College and Research Libraries 2015, *Framework for Information Literacy for Higher Education*, Accessed 25 February 2021, http://www.ala.org/acrl/sites/ala.org.acrl/files/content/issues/infolit/framework1.pdf

Baer, A. 2020, 'What intellectual empathy can offer information literacy education' in Goldstein, S. (eds), *Informed Societies: Why Information Literacy Matters for Citizenship, Participation, and Democracy*, Facet Publishing, London, pp. 47-68. https://doi.org/10.29085/9781783303922.005

Bawden, D. & Robinson, L. 2020, '"The dearest of our possessions": Applying Floridi's information privacy concept in models of information behavior and information literacy', *Journal of Association for Information Science and Technology*, vol. 71, no. 9, pp. 1030-1043. https://doi.org/10.1002/asi.24367

Case, D.O. & Given, L.M. 2016, *Looking for Information: A Survey of Research on Information Seeking, Needs, and Behavior*, 4th ed., Emerald, Bingley.

Cook, N.A. 2018, *Fake News and Alternative Facts: Information Literacy in a Post-truth Era*, [Kindle], ALA Editions, Chicago.

'COVID-19 reports sparking boorish behavior in communities' 2020, *The Asahi Shinbun (Asia & Japan Watch)*, 30 April.

De Abreu, B.S. 2016, 'Media literacy: Global connections' in De Abreu, B.S. & Yildiz, M.N. (eds), *Global Media Literacy in a Digital Age*, Peter Lang, New York, pp. 1-22. https://doi.org/10.3726/978-1-4539-1728-2

Denyer, S. & Kashiwagi, A. 2020, 'In Japan, coronavirus discrimination proves almost as hard to eradicate as the disease', *Washington Post*, 14 September. Accessed 14 December 2020. https://www.washingtonpost.com/world/asia_pacific/japan-coronavirus-discrimination/2020/09/13/e82e5aa4-eea0-11ea-bd08-1b10132b458f_story.html

Dervin, B. 1994, 'Information ↔ democracy: An examination of underlying assumptions', *Journal of the American Society for Information Science*, vol. 45, no. 6: pp. 369-385. https://doi.org/10.1002/(SICI)1097-4571(199407)45:6<369::AID-ASI3>3.0.CO;2-5

Dervin, B. & Frenette, M. 2003, 'Sense-making methodology: Communicating communicatively with campaign audience', in Dervin, B., Foreman-Wernet, L. & Lauterbach, L. (eds.), *Sense-making Methodology Reader: Selected Writings of Brenda Dervin*, Hampton Press, Cresskill, pp. 233-249.

'"Dōi nakutemo shisetsumei wo kōhyō" kurasutā hassei de dokuji kijun: Shizuokashi' 「同意なくても施設名を公表」クラスター発生で新基準 静岡市 2020, *Mainichi Shinbun* 毎日新聞, 8 December. Accessed 14 February 2021, https://mainichi.jp/articles/20201208/k00/00m/040/032000c

Fahey, R. & Hino, A. 2020, 'COVID-19, digital privacy, and the social limits on data-focused public health responses', *International Journal of Information Management*, vol. 55, 102181. https://doi.org/10.1016/j.ijinfomgt.2020.102181

Floridi, L. 2017, 'Group privacy: A defense and an interpretation' in Taylor, L., Floridi, L. & Van der Sloot, B. (eds), *Group Privacy: New Challenges of Data Technologies,* Springer, Cham, pp. 83-100. https://doi.org/10.1007/978-3-319-46608-8_5

Fourie, I. & Julien, H. 2014, 'Ending the dance: A research agenda for affect and emotion in studies of information behavior', *Proceedings of ISIC, the Information Behaviour Conference, Leeds, 2-5 September 2014: Part 1*. Accessed 1 June 2021, http://InformationR.net/ir/19-4/isic/isic09.html

Fukunaga, H. 福長 秀彦 2020, 'Toilet paper rumors and hoarding induced by the spread of coronavirus infections' 新型コロナウイルス感染拡大と流言・トイレットペーパー買いだめ, *The NHK Monthly Report on Broadcast Research* 放送研究と調査, July 2020, pp. 2-24. Accessed 1 December 2020, https://www.nhk.or.jp/bunken/research/domestic/pdf/20200701_8.pdf

'Govt looks for clusters to stop virus' 2020, *The Japan News*, 6 March, p. 3.

Hoechsmann, M. & Poyntz, S.R. 2012, *Media Literacies: A Critical Introduction*, Wiley-Blackwell, Malden. https://doi.org/10.1002/9781444344158

Hōmushō 法務省 n.d., *Shingata Korona Uirusu Kansenshō ni Kanren Shite: Futō na Sabetsu ya Henken wo Nakushimashō* 新型コロナウイルス感染症に関連して ：不当な差別や偏見をなくしましょう. Accessed 30 November 2020, http://www.moj.go.jp/JINKEN/jinken02_00022.html

Isono, M. 磯野 真穂 2020, 'Dōchō atsuryoku wo kaitai suru: Seken to tate shakai kara miru koronaka' 同調圧力を解体する ：世間とタテ社会から見るコロナ禍, *Journalism*, no. 363, pp. 60-65.

'Iwate, with no virus cases, develops 'us vs. them' mentality' 2020, *The Asahi Shinbun (Asia & Japan Watch)*, 2 July.

Jaeger, P. & Taylor, N.G. 2021, 'Arsenals of lifelong information literacy: Educating users to navigate political and current events information in world of ever-evolving misinformation', *Library Quarterly*, vol. 91, no. 1, pp. 19-31. https://doi.org/10.1086/711632

Julien, H. 2019, 'Digital literacy in theory and practice' in Mehdi, K. (ed.), *Advanced Methodologies and Technologies in Library Science, Information Management, and Scholarly Inquiry*, IGI Global, Hershey, pp. 22-32. https://doi.org/10.4018/978-1-5225-7659-4.ch003

Kawashima, K. 2020, 'Japanese stew on feeling forced to social distance, wear a face mask', *The Asahi Shinbun (Asia & Japan Watch)*, 13 July. Accessed 5 October 2020, http://www.asahi.com/ajw/articles/13491691

Koltay, T. 2011, 'The media and the literacies: Media literacy, information literacy, digital literacy', *Media, Culture, & Society*, vol. 33, no. 2, pp. 211-221. https://doi.org/10.1177/0163443710393382

Kondo, C., Saito, C., Deguchi, A., Hirayama, M. & Acar, A. 2010, 'Social conformity and response bias revisited: The influence of "others" on Japanese respondents', *Human Affairs*, vol. 20, no. 4, pp. 356-363. https://doi.org/10.2478/v10023-010-0036-6

Kōsei Rōdōshō Kenkōkyoku Kekkaku Kansenshōka. 厚生労働省健康局結核感染症課 2020, *Ichirui Kansenshō ga Kokunai de Hassei shita Baai ni Okeru Jōhō no Kōhyō ni Kakaru Kihon Hōshin* 一類感染症が国内で発生した場合における情報の公表に係る基本方針. Accessed 4 March 2021, https://www.mhlw.go.jp/content/000601059.pdf

Kōsei Rōdōshō Shingata Korona Uirusu Kansenshō Taisaku Suishin Honbu. 厚生労働省新型コロナウイルス感染症対策推進本部 2020, *Shingata Korona Uirusu Kansenshō ga Hassei shita Baai ni Okeru Jōhō no Kōhyō ni Tsuite (Hosoku)* 新型コロナウイルス感染症が発生した場合における情報の公表について（補足）. Accessed 24 February 2021, https://www.mhlw.go.jp/content/000652973.pdf

Lawal, V. & Bisto, C. 2020, 'Constructionists' approaches to information literacy: Exploring Savolainen's everyday life information seeking in information literacy research', *Annals of Library and Information Studies*, vol. 67, pp. 321-239. Accessed 11 March 2021, http://nopr.niscair.res.in/handle/123456789/55975

Leaning, M. 2017, *Media and Information Literacy: An Integrated Approach for the 21st Century*, Chandos Publishing, Cambridge. https://doi.org/10.1016/B978-0-08-100170-7.00001-9

Lenker, M.N. 2016, 'Motivated reasoning, political information, and information literacy education', *Portal: Libraries and the Academy*, vol. 16, no. 3, pp. 511-528. https://doi.org/10.1353/pla.2016.0030

Mackey, T.P. & Jacobson, T.E. 2014, *Metaliteracy: Reinventing Information Literacy to Empower Learners*, ALA Neal-Schuman, Chicago.

Manabe, A. 真鍋 厚 2020, 'Kanshi kokuhatsu de erareru anshinkan: Kakasenu kenryoku eno hihanteki shiten' 監視・告発で得られる安心感：欠かせぬ権力への批判的視点, *Journalism*, no. 363, pp. 66-73.

Martzoukou, K. & Sayyad Abdi, E. 2017, 'Toward an everyday life information literacy mind-set: A review of literature', *Journal of Documentation*, vol. 73, no. 4, pp. 634-655. https://doi.org/10.1108/JD-07-2016-0094

Miller, A.S. & Kanazawa, S. 2018, *Order by Accident: The Origins and Consequences of Conformity in Contemporary Japan*, [Kindle], Routledge, New York. https://doi.org/10.4324/9780429498565

Montiel-Overall, P. 2007, 'Information literacy: toward a cultural model', *The Canadian Journal of Information and Library Science*, vol. 31, no. 1, pp. 43-68.

Nihon Shibun Kyōkai & Nihon Minkan Hōsō Renmei. 日本新聞協会、日本民間放送連盟 2020. *Shingata Korona Uirusu Kansenshō no Sabetsu Henken Mondai ni Kansuru Kyōdō Seimei* 新型コロナウイルス感染症の差別・偏見問題に関する共同声明. Accessed 24 February 2021, https://j-ba.or.jp/category/topics/jba103853

Okan, O., Bollweg, T.M., Berens, E., Hurrelmann, K., Bauer, U. & Schaeffer, D. 2020, 'Coronavirus-related health literacy: A cross-sectional study in adults during the COVID-19 infodemic in Germany', *International Journal of Environmental Research and Public Health*, vol. 17, no. 15, 5503. https://doi.org/10.2139/ssrn.3631299

'Okinawa de hassei shita kurasutā 86-ken wo subete kōhyō: Ken kōhyō no kijun wo giron e' 沖縄で発生したクラスター86件を全て公表：県、公表の基準を議論へ 2021, *Okinawa Taimusu* 沖縄タイムス, 9 January. Accessed 14 February 2021, https://www.okinawatimes.co.jp/articles/-/690135

Osaki, T. 2020, 'Nightlife districts demonized over infection fears while grappling with coronavirus impacts', *Japan Times*, 9 June. Accessed 14 December 2020, https://www.japantimes.co.jp/news/2020/06/09/national/kabukicho-coronavirus/

Polizzi, G. 2020, 'Information literacy in the digital age: Why critical digital literacy matters for democracy' in Goldstein, S. (ed.), *Informed Societies: Why Information Literacy Matters for Citizenship, Participation, and Democracy*, Facet Publishing, London, pp. 1-23. https://doi.org/10.29085/9781783303922.003

Savolainen, R. 2007, 'Filtering and withdrawing: strategies for coping with information overload in everyday contexts', *Journal of Information Science*, vol. 33, no. 5, pp. 611-621. https://doi.org/10.1177/0165551506077418

Shimizu, K. & Lin, L. 2020, 'Defamation against healthcare workers during COVID-19 pandemic', *International Journal of Health Policy and Management*, in press, https://doi.org/10.34172/ijhpm.2020.184

'Shingata korona kansen wa jigō jitoku 11%' 新型コロナ「感染は自業自得」11％ 2020, *Asahi Shinbun*, Osaka morning ed. 朝日新聞 大阪朝刊, 29 June, p. 24.

'Shizuoka kurasutā, kigyōmei kōhyō de sabetsu jirei hagemashi mo' 静岡クラスター、企業名公表で差別事例　励ましも 2020, *Shizuoka Shinbun* 静岡新聞, 9 December. Accessed 14 February 2021, https://www.at-s.com/news/article/topics/shizuoka/839775.html

Subbian, V., Solomonides, A., Clarkson, M, Rahimzadeh, V.N., Petersen, C., Schreiber, R., DeMuro, P.R., Dua, P., Goodman, K.W., Kaplan, B., Koppel, R., Lehmann, C.U., Pan, E. & Senathirajah, Y. 2021, 'Ethics and informatics in the age of COVID-19: Challenges and recommendations for public health organization and public policy', *Journal of the American Medical Informatics Association*, vol. 28, no. 1, pp. 184-189. https://doi.org/10.1093/jamia/ocaa188

'Sutaba no jūgyōin ga korona ni kansen "kyūgyō no oshirase" ni kyakutachi ga atatakana hannō!' スタバの従業員が コロナに感染「休業のお知らせ』に客たちが温かな反応！ 2020, *Grape,* 11 September. Accessed 30 November 2020, https://grapee.jp/866635

Taylor, L., Floridi, L. & van der Sloot, B. 2017, 'Introduction: A new perspective on privacy', in Taylor, L., Floridi, L. & van der Sloot, B. (eds), *Group Privacy: New Challenges of Data Technologies,* Springer, Cham, pp. 1-12. https://doi.org/10.1007/978-3-319-46608-8_1

UNESCO Institute for Information Technologies in Education n.d., *Media and Information Literacy*. Accessed 1 June 2021, https://iite.unesco.org/mil/

'Univ. with infected students flooded with threats, slander' 2020, *The Yomiuri Shinbun*, 10 April, p. 3.

'University need not apologize for virus cluster, Tenri mayor says' 2020, *The Asahi Shinbun (Asia & Japan Watch)*, 27 August.

Wahl-Jorgensen, K. 2020, *Medhia to Kanjō no Seijigaku* メディアと感情の政治学 [Emotions, media and politics], Translated by Mitani, F. & Yamakoshi, S., Keisō Shobō, Tokyo.

Wahl-Jorgensen, K. 2020a, 'Coronavirus: How media coverage of epidemics often stokes fear and panic', *The Conversation*, 14 February. Accessed 2 March 2021, https://theconversation.com/coronavirus-how-media-coverage-of-epidemics-often-stokes-fear-and-panic-131844

'Why have no COVID-19 clusters occurred in pachinko parlors?' 2020, *Japan Today*, 25 July. Accessed 30 November 2020, https://japantoday.com/category/national/why-have-no-covid-19-clusters-occurred-in-pachinko-parlors

World Health Organization n.d., *Coronavirus*. Accessed 14 December 2020, https://www.who.int/health-topics/coronavirus#tab=tab_1

World Health Organization. 2020, *Managing the COVID-19 infodemic: Promoting healthy behaviours and mitigating the harm from misinformation and disinformation*. Accessed 1 December 2020, https://www.who.int/news/item/23-09-2020-managing-the-covid-19-infodemic-promoting-healthy-behaviours-and-mitigating-the-harm-from-misinformation-and-disinformation

Xie, B., He, D., Mercer, T., Wang, Y., Wu, D., Fleischmann, K.R., Zhang, Y., Yoder, L.H., Stephens, K.K., Mackert, M. & Lee, M.K. 2020, 'Global health crises are also information crises: A call to action', *Journal of the Association for Information Science and Technology,* vol. 71, no. 12, pp. 1419-1423. https://doi.org/10.1002/asi.24357