

COVID-19, Digital Media, and Health: Lessons Learned and the Way Ahead for the Study of Human Communication

Introduction

KATHRIN KARSAY
KU Leuven, Belgium

ANNE-LINDA CAMERINI
USI Università della Svizzera Italiana, Switzerland

JÖRG MATTHES
University of Vienna, Austria

During the COVID-19 pandemic, digital media played a pivotal role as a source of information, a tool for emotional expression, and, consequently, a determinant of psychological and social well-being. This article introduces a Special Section on COVID-19, digital media, and health. Based on the selected papers, we argue that the pandemic can serve as a magnifying glass to detect several critical reflection points for studying human communication. In particular, we conclude that the pandemic has aggravated existing differences in the effects of digital media, both in the positive (i.e., beneficial effects) and the negative (i.e., harmful effects) directions. We call on the field for a renewed focus on theory building, not just treating the pandemic as a special case but rather as a starting point for long-term, field-wide theory development. We also call for longitudinal, multidata, multiplatform, and multimethod designs.

Keywords: health communication, digital media, well-being, media effects

The coronavirus (COVID-19) pandemic has profoundly impacted and continues to affect our daily lives around the globe. While many countries are currently easing unpopular COVID-19 restrictions, the fact that the first author is quarantined and ill while writing this introduction is indicative of the current situation in Europe as one of the world's epicenters of the pandemic. As of March 2022, two years into the pandemic,

Kathrin Karsay: kathrin.karsay@kuleuven.be

Anne-Linda Camerini: anne.linda.camerini@usi.ch

Jörg Matthes: joerg.matthes@univie.ac.at

Date submitted: 3-15-2021

Copyright © 2023 (Kathrin Karsay, Anne-Linda Camerini, and Jörg Matthes). Licensed under the Creative Commons Attribution Non-commercial No Derivatives (by-nc-nd). Available at <http://ijoc.org>.

more than 433 million confirmed cases and more than 5.9 million deaths have been reported to the World Health Organization (WHO, 2022). In addition to the adverse risks to physical health and well-being, social distancing measures and the perceived threat of the virus have posed further challenges to mental and social well-being. In these trying and uncertain times, it has become abundantly clear—for communication scientists and scholars from neighboring disciplines—that digital media and digital communication continue to play a critical role.

On the one hand, digital media can provide opportunities to improve individuals' health, for instance, by connecting to others in times of social distancing, facilitating access to crucial public health information and social support, or providing a safe way to maintain a daily work routine. More precisely, digital media use during social isolation might serve as a coping tool by connecting with others to overcome feelings of loneliness, for example, through digital commensality practices (Spence, Mancini, & Huisman, 2019). Moreover, findings from a three-wave panel survey support the view that online social comparison fosters lower levels of distress and greater life satisfaction and social connectedness, suggesting downward social comparison processes. Seeing that others are equally bad off or sharing similar difficult experiences might elevate current psychosocial well-being (Ruggieri, Ingoglia, Bonfanti, & Lo Coco, 2021).

On the other hand, digital media might also threaten well-being and health, as users might face several obstacles related to its use. For instance, the constant checking of the latest news might lead to sleep problems (Koban, Neureiter, Stevic, & Matthes, 2022), and constant online connection can result in new forms of stress (de Bruin, de Haan, Vliegenthart, Kruikemeier, & Boukes, 2021), as, in many cases, video conferencing has substituted on-site education and work, individuals reported so-called Zoom fatigue (Fauville, Luo, Queiroz, Bailenson, & Hancock, 2021). The COVID-19 pandemic has, once again, demonstrated that digital media use, its drivers, and its consequences are not equal across all people, but societal—or better—digital inequalities exist. The pandemic has increased the digital divide, where particular groups do not have access to or the necessary skills to navigate online content, identify disinformation, and find support (Nguyen et al., 2020). Furthermore, it gives rise to stigma and hate speech directed toward single people, minority groups, and entire countries (Yuan et al., 2021), leading to a new convention to name variants of the coronavirus (WHO, 2021).

To conclude, in the context of the COVID-19 pandemic, digital media serves as a stressor, resource, or coping tool (Wolfers & Utz, 2022), highlighting the multifaceted and complex nature of the interconnectedness of digital media use and health.

This Special Section

This Special Section includes five articles following a rigorous peer-review process. They cover research data from four different countries and provide a diverse and rich perspective on the interrelations of COVID-19, digital media, and health. The first study, by King, Halversen, Morrow, Westhoff, and Brubaker, investigates the public discourse on Twitter during the three months following the first confirmed case of COVID-19 in the United States. The quantitative and qualitative analysis of tweets reveals that the discourse on mental health increased as the reported disease cases rose. Twitter proved to be a platform where those concerned with mental health made a concerted effort to provide social support and solidarity. These findings

suggest that communication practitioners can act as a bridge between healthcare organizations and patients and, as such, should take an active role in using Twitter and other social media and online discussion platforms to disseminate messages that offer support to those struggling with mental health.

The second article, by Hickerson and Stamps, discusses the interrelations from an audience perspective by focusing on Black audiences from the United States and their social media consumption during the pandemic. The authors find that social media fatigue mediates the relationship between social media consumption and group-based emotions such as anger, fear, and embarrassment, due to the discourse around their ethnic group and the pandemic on social media platforms. The findings have implications for health communicators by showing that aspects of group identity need to be considered to avoid the potential for message overload or fatigue.

The third article, by Laffan, Kuldass, Sciacca, O'Higgins Norman, and Milosevic, uses data from children and parents in Ireland to study predictors of children's anxiety during the first lockdown after the pandemic outbreak. The authors find that children and parents had different worries due to online schooling, and children's worries were associated with higher anxiety levels. The findings from this study have important policy implications for online schooling. The authors suggest implementing guidelines for online schooling to alleviate some of the worries reported by parents and children in the future.

In the fourth article, van Wezel, Krahmer, Vromans, and Bol report on four-wave longitudinal data to examine the relationship between media use and COVID-19 conspiracy beliefs over time in the Dutch population. Although they find no support for reciprocal relationships between media use and the belief in conspiracy theories at the within-person level, more frequent use of health-related and social media sources was associated with higher levels of conspiracy beliefs across persons. Even if only a small proportion of the population believed in conspiracy theories, and further research is needed to disentangle the nuanced relationship between media use and conspiracy beliefs, policymakers and journalists should be aware of their responsibilities to curb the spread of such beliefs.

The fifth and last article, by Yoo, Oh, and Choi, focuses on the exposure to COVID-19 misinformation across instant messaging apps in South Korea. The authors find that exposure to misinformation is related to lower levels of COVID-19 knowledge and intentions to engage in COVID-19-preventive measures. However, this relationship was weaker among individuals who consumed more pandemic-related news and engaged in interpersonal communication about COVID-19. This study implies that government health organizations might need to provide guidelines to news media to follow during health crises to prompt preventive behavior among the population in the future.

Lessons From the Pandemic and the Way Ahead for Research on Digital Media and Health

The Special Section provides a glimpse into the various perspectives of how digital media can serve as a coping tool for social support and solidarity (article 1), as a stressor that is associated with anger, fear, and anxiety (articles 2 and 3), and as a source for misinformation and conspiracy beliefs (articles 4 and 5). Although most articles report on the threats due to digital media use during the pandemic, such as, for example,

misinformation and online schooling, they also highlight the benefits of online social support. The Special Section teaches us some lessons for research on digital media and health in a pandemic—but also beyond.

At first glance, the lessons learned from this research correspond to our general, nonpandemic theorizing about digital media effects. Digital media use, as always, can have beneficial or detrimental psychological and social consequences, depending on how the media are used, on which cognitive and affective processes are triggered, and on individual, social or cultural predispositions. Digital media effects can be observed across the globe and throughout the entire period of the pandemic, and they touch almost every facet of human life. This observation is, of course, not very surprising.

But there are also some unique learnings. The findings of this Special Section and other research (e.g., Nguyen et al., 2020) suggest that digital media have accelerated health-related media effects throughout the pandemic. With strong effects being observed across the globe, it has been theorized that the pandemic may have increased the gaps between those who were benefitting from digital media use (i.e., in prepandemic times) and those for whom digital media was primarily associated with adverse health outcomes. For instance, while there has always been a segment of the public that was susceptible to the effects of misinformation, these individuals were now facing a myriad of opportunities to dive deeply into a world of misleading information, conspiracy theories, or other potentially health-threatening behaviors. Likewise, mindfully regulating one's own digital media use has been proposed as a key pillar to maintaining psychological and social well-being (e.g., Matthes, Karsay, Hirsch, Stevic, & Schmuck, 2021; Schneider, Lutz, Halfmann, Meier, & Reinecke, 2022; Vanden Abeele, 2020)—but in times of the pandemic, the potential negative effects of permanent and excessive digital media use have risen exponentially. Overall, one could hypothesize that the pandemic has aggravated the differences and patterns that already existed with actual health-related outcomes in both positive and negative directions. On top of that, the pandemic serves as a critical point for reflection in communication research (e.g., Karnowski & von Pape, 2022; Lemish, 2021; Quandt & Wahl-Jorgensen, 2021), particularly relevant for health communication, but also for the study of human communication at large.

First, we should reflect more carefully on identifying the driving questions that need to be addressed in future research beyond already established research lines, acknowledging the acceleration of previous trends (e.g., the ongoing digitalization process, the spread of mis- and disinformation online, or problematic digital media use), and the emergence of new phenomena hardly existent before the pandemic (e.g., online learning, "Zoom fatigue," health professionals as social media influencers). Toward that end, we need to reflect on whether our existing theories are sufficient to explain and predict the pandemic's various psychological and societal outcomes. Most research—including the work in this Special Section—has applied existing theories or concepts to the pandemic. The speed and timeliness of this research have been impressive, particularly within our discipline. Still, a meta-theoretical discussion in general or the development of novel theoretical strands in particular is largely missing.

We, therefore, call for a renewed focus on theory. This focus is important because if the pandemic is only treated as a unique situation or a case study, then the general theoretical learnings for a time beyond the pandemic are marginal. In other words, when the pandemic is over, what do we take from these findings, what will remain? Can the pandemic be merely understood as a special case, that is, some form of boundary

condition for media effects to unfold? We don't think so. Suppose the pandemic serves as a magnifying glass for studying digital media effects and health. In that case, we may be able to detect theoretical mechanisms or processes that we did not observe before, and these theoretical insights may also shape our thinking beyond the pandemic. For instance, popular COVID-19-related concepts, such as, for instance, "Zoom fatigue" (Fauville et al., 2021) or "doomscrolling" (Sharma, Lee, & Johnson, 2022), may very well matter in other areas of the field, even outside health communication. Likewise, some facets of the pandemic may have long-term consequences. For instance, a generation of pupils had limited social contact or was isolated from their peers and other activities (Marciano, Ostroumova, Schulz, & Camerini, 2022). Rephrased, some health-related phenomena in five, ten, or even twenty years may have their roots in times of the pandemic. Such long-term consequences can only be understood with COVID-19-related theory building, even when we are (hopefully) past the pandemic.

Furthermore, the pandemic reminds us of the necessity of interdisciplinary and transdisciplinary research. Obviously, in times of the pandemic, research on digital media and health can only be adequately understood when incorporating psychological, sociological, and medical perspectives. But even within a single discipline, one key lesson of the pandemic is that we cannot, and should not, further fragmentize into tiny subareas of the field. In many communication departments across the globe, there was COVID-19 related research on several previously unrelated topics, such as health communication, political communication, or journalism (e.g., Arendt, Markiewitz, Mestas, & Scherr, 2020; Bright & Schau, 2021; van Aelst et al., 2021), just to name a few. But now, these areas are as intertwined as never before. For instance, health communication and political communication scholars studied polarization on COVID-19 or the effects of misinformation. Likewise, trust in science (i.e., science communication) critically shapes the perception of news (i.e., journalism studies) on COVID-19, which has been found to shape social distancing behaviors (i.e., health communication; Neureiter, Stubenvoll, Kaskelėviciute, & Matthes, 2021).

Second, the pandemic is a moving phenomenon, perhaps one that will always be there. This possibility urges us to rethink our use of research methods, particularly for (a) longitudinal or dynamic methods, (b) the use of multiple social media platforms, and (c) the matching of different data sources. Clearly, the situation in March 2020 was completely different compared to the situation in September 2021 or perhaps even March 2022. Thus, it is safe to say that the time a study was conducted plays a crucial role in the findings and the substantial interpretations. Taking developments into account underlines the need for truly longitudinal and dynamic methods. Cross-sectional studies, conducted at a single point in time, have never been more limited and more flawed as in times of COVID-19. Related to that, we should evaluate and carefully adopt new methods for data collection (e.g., focus groups on online video conferencing platforms, scraped social media data). This need has become particularly evident in times of the pandemic, for instance, to reach people or get a better understanding of the public discourse. Most important, there is a need to move beyond single-method studies, particularly those that rely on self-reports only. If we take the diachronic nature of the pandemic seriously, we need time-series data or longitudinal behavioral data. The combination of survey data and digital trace data (de Vreese et al., 2017; Stier, Breuer, Siegers, & Thorson, 2019) or the combination of public policy data with data from search engines (Arendt et al., 2020) are particularly promising. But these data come with significant practical, conceptual, and ethical challenges. Furthermore, we need to acknowledge that single-platform studies (e.g., with a focus on Twitter, Instagram, or Telegram) are notoriously difficult to generalize across platforms.

For instance, a study on COVID-19-related misinformation yields completely different findings when looking at Instagram compared to Telegram. Research across platforms is therefore needed.

Third, we should be more proactive in collaborating with stakeholders and informing the public and policymakers about our findings. As communication scholars, we need to get out of the ivory tower. We need to do timely yet rigorous research to collect evidence and communicate it so that people outside of academia can understand the significance and have concrete suggestions and tools for action. The timely identification of mis- and disinformation about the COVID-19 pandemic in the media and evidence of their detrimental effects on people's beliefs and prevention behavior allowed national and international health organizations to take action by debunking misperceptions online and providing the public with strategies on how to best discern such information. Bridging the development of novel theoretical concepts with longitudinal, multimethod data while at the same time communicating this research to stakeholders and a larger public is a true challenge. Even when generating some media attention, the typical journal article and the accompanying Twitter euphoria may not be sufficient anymore. Communication scholars need to invest more efforts to translate their findings into practical action, developing structural resources for science communication, actively seeking stakeholder attention and societal impact.

To conclude, the pandemic has provided an impetus for reflection within the discipline regarding scope, theory, methods, and societal relevance. The implications of this research for the study of human communication are significant and go beyond the studies assembled in this Special Section. It is now time to take a meta-theoretical perspective, flowing into longitudinal, multidata, multiplatform, and multimethod designs that generate insights relevant to academia and policymakers, health professionals, and society at large. We are not yet there, but we hope this Special Section is one step in that direction.

References

- Arendt, F., Markiewitz, A., Mestas, M., & Scherr, S. (2020). COVID-19 pandemic, government responses, and public mental health: Investigating consequences through crisis hotline calls in two countries. *Social Science & Medicine*, 265, 113532. <https://doi.org/https://doi.org/10.1016/j.socscimed.2020.113532>
- Bright, L. F., & Schau, H. J. (2021). Pop-up special section introduction: Advertising and COVID-19—Examining the impacts of the pandemic on agencies, consumers, and brands. *Journal of Advertising*, 50(3), 217–220. <https://doi.org/10.1080/00913367.2021.1933657>
- de Bruin, K., de Haan, Y., Vliegenthart, R., Kruikemeier, S., & Boukes, M. (2021). News avoidance during the Covid-19 crisis: Understanding information overload. *Digital Journalism*, 9(9), 1286–1302. <https://doi.org/10.1080/21670811.2021.1957967>
- de Vreese, C. H., Boukes, M., Schuck, A., Vliegenthart, R., Bos, L., & Lelkes, Y. (2017). Linking survey and media content data: Opportunities, considerations, and pitfalls. *Communication Methods and Measures*, 11(4), 221–244. <https://doi.org/10.1080/19312458.2017.1380175>

- Fauville, G., Luo, M., Queiroz, A. C. M., Bailenson, J. N., & Hancock, J. (2021). Zoom exhaustion & fatigue scale. *Computers in Human Behavior Reports*, 4, 100119. <https://doi.org/https://doi.org/10.1016/j.chbr.2021.100119>
- Karnowski, V., & von Pape, T. (2022). Business as usual? Taking stock of submissions and reviews two years after the first coronavirus lockdowns. *Mobile Media & Communication*, 10(2), 163–173. <https://doi.org/10.1177/20501579221080594>
- Koban, K., Neureiter, A., Stevic, A., & Matthes, J. (2022). The COVID-19 infodemic at your fingertips: Reciprocal relationships between COVID-19 information FOMO, bedtime smartphone news engagement, and daytime tiredness over time. *Computers in Human Behavior*, 130, 107175. <https://doi.org/https://doi.org/10.1016/j.chb.2021.107175>
- Lemish, D. (2021). Like post-cataract surgery: What came into focus about children and media research during the pandemic. *Journal of Children and Media*, 15(1), 148–151. <https://doi.org/10.1080/17482798.2020.1857279>
- Marciano, L., Ostroumova, M., Schulz, P. J., & Camerini, A.-L. (2022). Digital media use and adolescents' mental health during the Covid-19 pandemic: A systematic review and meta-analysis. *Frontiers in Public Health*, 9, 793868. Retrieved from <https://www.frontiersin.org/article/10.3389/fpubh.2021.793868>
- Matthes, J., Karsay, K., Hirsch, M., Stevic, A., & Schmuck, D. (2021). Reflective smartphone disengagement: Conceptualization, measurement, and validation. *Computers in Human Behavior*, 128, 107078. <https://doi.org/https://doi.org/10.1016/j.chb.2021.107078>
- Neureiter, A., Stubenvoll, M., Kaskeleviciute, R., & Matthes, J. (2021). Trust in science, perceived media exaggeration about COVID-19, and social distancing behavior. *Frontiers in Public Health*, 9. Retrieved from <https://www.frontiersin.org/article/10.3389/fpubh.2021.670485>
- Nguyen, M. H., Gruber, J., Fuchs, J., Marler, W., Hunsaker, A., & Hargittai, E. (2020). Changes in digital communication during the COVID-19 global pandemic: Implications for digital inequality and future research. *Social Media + Society*, 6(3), 1–6. <https://doi.org/10.1177/2056305120948255>
- Quandt, T., & Wahl-Jorgensen, K. (2021). The coronavirus pandemic as a critical moment for digital journalism. *Digital Journalism*, 9(9), 1199–1207. <https://doi.org/10.1080/21670811.2021.1996253>
- Ruggieri, S., Ingoglia, S., Bonfanti, R. C., & Lo Coco, G. (2021). The role of online social comparison as a protective factor for psychological wellbeing: A longitudinal study during the COVID-19 quarantine. *Personality and Individual Differences*, 171, 110486. <https://doi.org/10.1016/j.paid.2020.110486>

- Schneider, F. M., Lutz, S., Halfmann, A., Meier, A., & Reinecke, L. (2022). How and when do mobile media demands impact well-being? Explicating the Integrative Model of Mobile Media Use and Need experiences (IM3UNE). *Mobile Media & Communication, 10*(2), 251–271. <https://doi.org/10.1177/20501579211054928>
- Sharma, B., Lee, S. S., & Johnson, B. K. (2022). The dark at the end of the tunnel: Doomscrolling on social media newsfeeds. *Technology, Mind, and Behavior, 3*(1). <https://doi.org/10.1037/tmb0000059>
- Spence, C., Mancini, M., & Huisman, G. (2019). Digital commensality: Eating and drinking in the company of technology. *Frontiers in Psychology, 10*. Retrieved from <https://www.frontiersin.org/article/10.3389/fpsyg.2019.02252>
- Stier, S., Breuer, J., Siegers, P., & Thorson, K. (2019). Integrating survey data and digital trace data: Key issues in developing an emerging field. *Social Science Computer Review, 38*(5), 503–516. <https://doi.org/10.1177/0894439319843669>
- van Aelst, P., Toth, F., Castro, L., Štětka, V., Vreese, C. de, Aalberg, T., . . . & Theocharis, Y. (2021). Does a crisis change news habits? A comparative study of the effects of COVID-19 on news media use in 17 European countries. *Digital Journalism, 9*(9), 1208–1238. <https://doi.org/10.1080/21670811.2021.1943481>
- Vanden Abeele, M. M. P. (2020). Digital wellbeing as a dynamic construct. *Communication Theory, 31*(4), 1–24. <https://doi.org/10.1093/ct/qtaa024>
- Wolfers, L. N., & Utz, S. (2022). Social media use, stress, and coping. *Current Opinion in Psychology, 45*, 101305. <https://doi.org/10.1016/j.copsyc.2022.101305>
- World Health Organization. (2021, May 31). *WHO announces simple, easy-to-say labels for SARS-CoV-2 Variants of Interest and Concern*. Retrieved from <https://www.who.int/>
- World Health Organization. (2022). WHO Coronavirus (COVID-19) dashboard. Retrieved from <https://covid19.who.int/>
- Yuan, K., Huang, X.-L., Yan, W., Zhang, Y.-X., Gong, Y.-M., Su, S.-Z., . . . & Lu, L. (2021). A systematic review and meta-analysis on the prevalence of stigma in infectious diseases, including COVID-19: A call to action. *Molecular Psychiatry, 27*(1), 19–33. <https://doi.org/10.1038/s41380-021-01295-8F>