

The Impact of the COVID-19 Pandemic on Communication Studies: Bibliometric Analysis

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ABSTRACT

This research aims to examine which issues are mainly carried out in international articles published in journals that direct the field of communication during the COVID-19 pandemic process and how many of these studies are related to COVID-19 through the bibliometric analysis method. For this purpose, the top 20 journals with high impact factors in communication were evaluated according to the Journal Citation Reports (2019) and Scimago Journal & Country Rank (2019) in the Q1 rank. The articles published in the relevant journals between January 1, 2020 - April 20, 2021, have been accessed through the Web of Science database. As a result of the analyses performed using R software, a total of 1613 articles were examined, and it was determined that the number of articles related to COVID-19 was 36. 25 of 36 works on COVID-19 were published in the "Social Media + Society" journal. It was observed that 14 of the first 20 journals did not publish articles on COVID-19. It is seen that 40% of the top 10 authors who published most in the field of communication during the relevant research period were from the University of Amsterdam, and 75% of the authors who worked on COVID-19 were from the University of Zurich. While the main keywords in the communication literature were "social media," "journalism," "news," "Twitter," "Facebook," and "Instagram," the concepts of "social media," "misinformation," and "contact tracing" came to the fore in COVID-19 related studies.

Keywords: Communication, COVID-19, Bibliometric Analysis, R, Q1 Rank

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İletişim Çalışmalarına COVID-19 Pandemisi Etkisi: Bibliyometrik Analiz

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ÖZ

Bu araştırmanın amacı COVID-19 pandemi sürecinde iletişim alanına yön veren dergilerde yayımlanan uluslararası makalelerde ağırlıklı olarak hangi konularla ilgili çalışmalar yapıldığı ve bu çalışmaların ne kadarının COVID-19 ile ilgili olduğunun bibliyometrik analiz yöntemi aracılığıyla incelenmesidir. Böylelikle iletişim disiplininin pandemi sürecine akademik olarak nasıl tepki verdiği açıklanmaya çalışılmaktadır. Bu amaç doğrultusunda Q1 kategorisinde yer alan Journal Citation Reports (2019) ve Scimago Journal & Country Rank'a (2019) göre iletişim alanındaki etki faktörü yüksek ilk 20 dergi değerlendirmeye alınmıştır. İlgili dergilerde 1 Ocak 2020- 20 Nisan 2021 döneminde yayımlanan makalelere Web of Science veri tabanı aracılığıyla ulaşılmıştır. R yazılımı kullanılarak gerçekleştirilen analizler sonucunda toplam 1613 makale incelenmiş, bu çalışmalardan COVID-19 ile ilişkili olan makale sayısının 36 olduğu tespit edilmiştir. COVID-19 ile ilgili 36 çalışmanın 25 tanesi 'Social Media + Society' dergisinde yayımlanmıştır. İletişim alanında etki faktörüne göre ilk 20 dergiden 14 tanesinde COVID-19 ile ilgili makale yayımlanmadığı görülmüştür. İlgili araştırma döneminde iletişim alanında en fazla yayın yapan ilk 10 yazarın %40'ının University of Amsterdam'da, COVID-19 konulu çalışmaları yapan yazarların %75'inin kurumu ise University of Zurich olmuştur. İletişim literatüründe ön plana çıkan anahtar kelimeler "social media", "journalism", "news" "Twitter", "Facebook" ve "Instagram" kavramları iken COVID-19 ile ilgili çalışmalarda ise "social media", "misinformation" ve "contact tracing" kavramları ön plana çıkmıştır.

Anahtar Sözcükler: İletişim, COVID-19, Bibliyometrik Analiz, R, Q1 Sıralaması

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INTRODUCTION

The new type of coronavirus (COVID-19) epidemic, which started in China in the last months of 2019, has gained a global dimension after it was declared as a pandemic by the World Health Organization on March 11, 2020. It is thought that just as societies have survived significant epidemics in the past, the COVID-19 pandemic will also take its place in the historical process as one of them. Due to each epidemic's unique biological and epidemiological character, social responses may be peculiar to the epidemic. COVID-19 stands out as a pandemic based on "*segregation*" and "*maintaining physical distance*" in social life. Although the pandemic is medical-centered, it has triggered challenging processes involving sociology, psychology, politics, and communication. With the correct use of communication tools, it is possible to reduce the adverse effects of this process on individuals and to guide them, establish a connection with society, and ensure that they are informed correctly.

The influencing, informing, and directing nature of communication determines the physical, intellectual, and spiritual positions of individuals and societies in extraordinary periods. This study aims to evaluate how much the communication discipline has exercised this power in an extraordinary period such as a pandemic through bibliometric analysis over the produced academic works. The bibliometric analysis enables academic publications such as published journals, books, and articles to be examined through mathematical and statistical techniques (Pritchard, 1969, p. 348). In this respect, it covers all scientific publications related to a particular theme/topic or area within a certain period (Cooper, 1998). The information obtained by bibliometric analysis shows the direction of the relevant field or literature and the efficiency of the information produced (Van Raan, 2005). In addition, researchers who are prominent in the scientific field provide the opportunity to evaluate their contributions to the field, publications, media organs, and institutions (Hall, 2011). The citation and joint citation analyses included in the bibliometric analysis are also very decisive in revealing the scientific impact of the author or institution. Citation analysis reveals landmark studies, central concepts, and relationships in a discipline (De Bakker, Groenewegen, & Den Hond, 2005). In short, analysing which authors and articles are frequently cited expresses how much "value" they have for other researchers (Kim & McMillan, Evaluation of internet advertising research: A Bibliometric Analysis of citations from key sources, 2008; Pasadeos, Phelps, & Kim, 1998). In summary, the method of bibliometric analysis provides essential information on determining which works, authors or journals played an essential role in the evolution of

the relevant discipline, finding and developing current topics in the field of research in recent years (Liang & He, 2017).

The research question of this study is to obtain information about the studies conducted in this time course related to COVID-19 by revealing what the most referred journals are, who the top journal published authors are, what the most productive institutions and the prominent notion are in the field of communication during the COVID-19 pandemic. Thus, this research attempts to determine what topics the academic articles published during this period are focused on and how up-to-date they are. In addition, this research seeks answers to two fundamental questions:

1. What kind of studies has been conducted in articles published in academic journals with high impact factors in the communication discipline during the COVID-19 pandemic?
2. What kind of research has been done on COVID-19 in the articles published in these academic journals?

As a part of this research, the sensitivity of the communication discipline to the "important" and "current" events was evaluated over studies published in the top 20 academic journals, which are considered the most effective in the field by the relevant criteria. Revealing what the subjects are to have been studied in the field of communication during the COVID-19 pandemic and the efficiency of the information gathered, this research also enables the field's status quo to be analysed. Thus, the fact mentioned above makes this study important, primarily for it guides the researchers for future research interests and lets them see how the field of communication has evolved.

BIBLIOMETRIC STUDIES IN THE FIELD OF COMMUNICATION

Many studies in international literature examine scientific publications in communication with the bibliometric method. The earliest bibliometric studies in the field of communication were mainly in the form of reviewing communication journals. These early studies focused on how the communication discipline is structured in general (Reeves & Borgman, 1983; Rice, Borgman, & Reeves, 1988; So, 2010). One of the earliest of these studies is Reeves and Borgman's (1983) bibliometric evaluation of significant journals in communication. The study identified nine prominent journals in the field and evaluated their citation links with each other and their effects on journals outside the field. The aforementioned journals

include the work of journals between 1977-1979, which are included in the Social Sciences Citation Index and Journal Citation Reports. According to the study's findings, only 13% of the journals referred to other communication journals, and 44% were self-cited. While the "Human Communication Research" journal had the most influence in the communication discipline, the journal that had the most influence outside the discipline was "Public Opinion Quarterly."

Subsequent bibliometric studies in the field of communication have shown a tendency to examine citations as a data source (So, 2010). Funkhouser (1996) investigated the effect of scientific citation indexes in which communication journals were scanned on citation-based evaluations. Feeley (2008) also examined communication journals between 2002 and 2005 with the bibliometric analysis method in his study. He evaluated 19 journals in the field during that period and ranked the first four journals among them according to the degree of influence that citations are determinant. These journals were: "Human Communication Research," "Personal Relationships," "Journal of Communication," and "Communication Research." So (2010) only dealt with the Asian literature within the scope of his study, in which he examined scientific publications in the field of communication. His study tried to explain whether the interest in Asian communication has increased in the last 20 years until 2010 and what level of participation there was among Asian academics. The study results showed that especially new media and public relations fields were on the rise in Asian communication literature.

Further work focused on the field has also been carried out. Lee, Jung, and Song (2016) examined the works in the field of communication between 1990 and 2014 within the scope of the subject and method, thus explaining the trends that have occurred in the subject and method over the years. Demeter (2018) examined the international journals that dominated the field of communication and media in terms of the 2013-2017 period and tried to explain the current trends in the field. The results showed that Western articles in Western journals edited by Western editorial board members dominated the field. Along with general communication studies, there are also bibliometric studies on different areas of the communication discipline. While Comfort and Park (2018) examined the peer-reviewed literature in environmental communication, Kim and McMillan (2008) tried to find how scientific studies shaped the field of internet advertising and reveal the change over time. Again, in the field of public relations, bibliometric analyses were conducted on the field of corporate social

responsibility (Ji, Tao, & Rim, 2020), public relations literature (Ki, Pasadeos, & Ertem-Eray, 2019) and, internal communication in public relations (Lee & Yue, 2020).

METHODOLOGY

Based on the basic information of the works examined within the scope of the research, the number of citations, the authors with the highest number of publications, the institutions/universities contributing the most to the field, the keyword analysis of the works, and the data of the study subjects in which the field is concentrated has been shared. R-Studio software that calculates bibliometric statistics based on quantitative research and the Bibliometrix package program developed by Aria and Cuccurullo (2017) were used to analyse the data.

During the COVID-19 pandemic process, scientific journals that guide the field to provide information about the fundamental dynamics and focus study issues of the studies in the field of communication were examined. The works in the field of communication, in the Q1 rank and the top 20 journals with the highest impact factor (Table 2), during the specified period, were included in the research. The top 20 journals' highest impact factors are seen in Table 2 are determined by examining the SJR (Scimago Journal & Country Rank, 2019) and JCR (Journal Citation Reports, 2019) data. In both grading systems, journals are ranked according to their scientific performance within the framework of essential criteria such as 'impact factor' and 'Q Ranking,' and significance is attributed to the journals. Although there are differences between the two rating systems, there are no differences in the "significance levels" attributed to journals. In the research, Q ranking data were taken during the process of determining the journals related to the field to be analysed. Q1 represents the highest value in Q ranking and is ranked as Q1, Q2, Q3, and Q4. It was determined that the works produced in the field of communication (Q1: 94, Q2: 94, Q3: 95, and Q4: 91) were published in 374 journals in total. The impact factor of the journal is determinant in the ranking within the Q ranking.

Data on scientific studies are accessed through databases such as Web of Science, Scopus, Google Scholar, and Science Direct (Cobo, Lopez-Herrera, Herrera-Viedma, & Herrera, 2011). Within the scope of the research, in order to access international scientific citation indexes related to the field, the "Web of Science Core Collection" (Güzeller & Çeliker, 2017; Yang et al., 2013) was used, which is seen as an essential database in bibliometric studies and is widely preferred. The scanned works were accessed

in all indexes in the Web of Science (WOS) database. These indexes are Science Citation Index Expanded (SCI-EXPANDED), Social Sciences Citation Index (SSCI), Arts & Humanities Citation Index (A & HCI), Conference Proceedings Citation Index- Science (CPCI-S), Conference Proceedings Citation Index- Social Science & Humanities (CPCI-SSH), Book Citation Index - Science (BKCI-S), Book Citation Index- Social Sciences & Humanities (BKCI-SSH) and Emerging Sources Citation Index (ESCI).

The research was carried out in two stages. In the first stage, all articles in the field of communication were published in English, in all indexes scanned in WOS, and in the top 20 journals with the highest impact factor at the Q1 level during the COVID-19 pandemic period (January 1-April 20, 2021) were examined.

In the second stage, only those related to COVID-19 among the studies in the first 20 journals determined in the field of communication according to Q rank and impact factor were considered. Since the purpose of the research is to evaluate positions of the journals that guide the communication literature during the COVID-19 pandemic process, keyword/word groups in the subject search of the field were determined and scanned as: "2019-nCoV" OR "COVID-19" OR "Coronavirus Disease 2019" OR "2019 Novel Coronavirus Diseases" OR "COVID-19 pandemic". In this way, this study tries to reach articles related to the field with the specified word/word groups in the "title," "abstract," and "keywords" of the works in the relevant journals.

Data Properties

The first study in the field of communication included in the relevant database dated back to 1979. The total number of works accessed by the database from 1979 to April 20, 2021, is 38533. It was determined that 1613 articles were produced in the field of "communication" in the period specified for the research (January 1, 2020 - April 20, 2021), and the comments and analyses in this research were made regarding these 1613 works. In the same period, the number of works produced directly and indirectly related to COVID-19, the subject of research, is only 36. In Table 1, the data regarding the two steps of the research are shared comparatively.

Table 1 Basic Information About Data

	GENERAL DATA FOR THE RESEARCH PERIOD	COVID-19 DATA FOR THE RESEARCH PERIOD
Period	2020-2021	2020-2021
Total publications	1613	36
Average citation per publication	1,66	1,11
Average annual citation per publication	1,27	0,83
References	67376	1261
Publication Type	Article	Article
Publication Language	English	English
Number of single-author publications	419	12
Number of multi-author publications	1194	24
Total	1613	36

During the COVID-19 pandemic process, journals containing 1613 works subject to bibliometric analysis related to the field of communication are shared in Table 2. As shown in Table 2, all journals included in the study are in the Q1 rank and are sorted by impact factor. Journal impact factor, which is seen as an essential criterion in determining the quality of journals, is obtained by dividing the number of journal citations in the previous two years by the number of citations published by the same journal (Feeley, 2008). In the ranking, the journals with the highest impact factor in the field were selected, and through the articles produced in this field were tried to get a general evaluation opportunity about the field.

Table 2 Journals Included In The Research And Their Features

	JOURNAL NAME	NUMBER OF PUBLICATIONS			Q RANKING	IMPACT FACTOR	h-INDEX
		2020	2021	TOTAL			
1	New Media & Society	239	42	282	Q1	5,74	87
2	Information Communication & Society	200	46	246	Q1	5,19	59
3	Political communication	61	7	68	Q1	4,59	72
4	Journal of Advertising	38	14	52	Q1	4,32	89
5	Communication Theory	22	7	29	Q1	4,32	67
6	Human Communication Research	16	0	16	Q1	3,97	75
7	Journal of Communication	38	0	38	Q1	3,95	112
8	Public Opinion Quarterly	17	0	17	Q1	3,79	94
9	Digital Journalism	88	19	107	Q1	3,64	30
10	International Journal of Press/Politics	58	11	69	Q1	3,58	54
11	Communication Methods and Measures	23	3	26	Q1	3,56	18
12	Media Psychology	37	5	42	Q1	3,55	62
13	Big Data & Society	58	12	70	Q1	3,25	30
14	Social Media + Society	172	34	206	Q1	3,14	16

15	Communication Research	75	21	96	Q1	3,02	89
16	International Journal of Advertising	76	12	88	Q1	3,02	37
17	Applied Linguistics	42	0	42	Q1	2,84	84
18	Communication Monographs	28	8	36	Q1	2,72	58
19	Mass Communication and Society	39	13	52	Q1	2,49	28
20	Journal of Advertising Research	31	0	31	Q1	2,38	76
	Total	1359	254	1613			

When the features of the journal in the field of communication are examined through Table 2, New Media & Society journal takes first place with a 5,74 impact factor, while Journal of Communication (112) stands out in the h-index, which is used as a criterion in determining the publication effectiveness. H-index was developed by Hirsch (2005) and is an approach stating that there are at least h articles with h citations. In the field of communication, it was observed that a total of 1.359 works were produced in 2020 in the top 20 journals, with the highest impact factor during the period specified for research (January 1, 2020 - April 20, 2021). Journals of New Media & Society (239), Information Communication & Society (200), and Social Media + Society (172) are listed as the top three journals in the field.

FINDINGS

The findings of the study were shared in two stages. In the first stage, the works produced in the field of communication during the COVID-19 pandemic (January 1, 2020 - April 20, 2021) in the top 20 journals with the highest impact factor were examined with bibliometric analysis. The second stage tried to determine how many of the studies conducted in the top 20 journals with the highest impact factor in the field during the COVID-19 pandemic were related to COVID-19. In both stages, the studies were examined in the most cited publications, the authors with the most publications, and mainly studied subjects.

General Findings of the Research Period

A bibliometric analysis of 1613 works in the field of communication, in Q1 rank and published in journals with the highest impact factor, was conducted in the context of various criteria. First of all, the top 10 works that received the most citations out of the total 1613 works analysed were ranked from large to small according to the total number of citations in the Web of Science Database (WOS TC) (Table 3). Next, it was determined that the first two most cited articles were included in the "*Information,*

Communication & Society" journal. Then, again, in the ranking according to the number of WOS TC, it was seen that six articles among the first ten publications were published in the "*Communication Research*" journal.

The study by Obar and Oeldorf-Hirsch (2020) is the most cited work. Currently continuing his academic studies at the Department of Communication Studies at York University, 15 works of Jonathan A. Obar received 15 or more citations (h-index: 15), while 77 works of his total received 2184 citations (Google Scholar Citations, 2021). His work is an experimental study on the privacy policies of social network service providers. In work, the practices of service providers are critically approached and defined as the biggest lie on the internet.

Chen's (2020) study is the second most cited work. She is currently continuing her academic studies at Asia University. In her work, Chen examines the effects of smartphones on addictive behavior in the context of psychological factors such as self-esteem, life satisfaction, and social identity through LINE social media platforms.

Table 3 10 Most Cited Publications during the Research Period

	PUBLICATIONS	JOURNAL NAME	WEB OF SCIENCE TOTAL CITATIONS	GOOGLE SCHOLAR TOTAL CITATIONS
1	Obar, J. A. & Oeldorf-Hirsch, A. (2020) The biggest lie on the Internet: Ignoring the privacy policies and terms of service policies of social networking services. DOI: 10.1080/1369118X.2018.1486870	Information, Communication & Society	62	308
2	Chen, C.-Y. (2020). Smartphone addiction: Psychological and social factors predict the use and abuse of a social mobile application. DOI: 10.1080/1369118X.2018.1518469	Information, Communication & Society	58	27
3	Hayes, A. F. & Cou tts, J. J. (2020). Use omega rather than Cronbach's Alpha for estimating reliability. But....DOI: 10.1080/19312458.2020.1718629	Communication Methods and Measures	56	90
4	Frison, E. & Eggermont, S. (2020). Toward an integrated and differential approach to the relationships between loneliness, different types of Facebook use, and adolescents' depressed mood. DOI: 10.1177/0093650215617506	Communication Research	51	101
5	Metzger, M. J., Hartsell, E. H. & Flanagan, A. J. (2020). Cognitive dissonance or credibility? A comparison of two theoretical explanations for selective exposure to partisan news. DOI: 10.1177/0093650215613136	Communication Research	42	106
6	Knobloch-Westerwick, S., Mothes, C. & Polavin, N. (2020). Confirmation bias, in group bias, and negativity bias in selective exposure to political information. DOI:10.1177/0093650217719596	Communication Research	40	85

7	Kenski, K., Coe, K. & Rains, S. A. (2020). Perceptions of uncivil discourse online: An examination of types and predictors. DOI: 10.1177/0093650217699933	Communication Research	36	77
8	Walter, N. & Tukachinsky, R. (2020). A Meta-Analytic examination of the continued influence of misinformation in the face of correction: How powerful is it, why does it happen, and how to stop it? DOI: 10.1177/0093650219854600	Communication Research	35	80
9	Schulz, A., Wirth, W. & Müller, P. (2020). We are the people, and you are fake news: A social identity approach to populist citizens' false consensus and hostile media perceptions. DOI: 10.1177/0093650218794854	Communication Research	33	93
10	De Veirman, M. & Hudders, L. (2020). Disclosing sponsored Instagram posts: The role of material connection with the brand and message-sidedness when disclosing covert advertising. DOI:10.1080/02650487.2019.1575108	International Journal of Advertising	33	78

The work of Hayes and Coutts (2020) is the third most cited work. Andrew F. Hayes works mainly on statistics and methodology, has 98 works cited at a very high rate of 132876, and continues his academic studies at the University of Calgary. His work included in this research is more a methodological study of methods used in calculating model measurement errors and structural modelling programs than in the field of communication.

In the author analysis regarding the works in designated journals published during the determined period (January 1, 2020-April 20, 2021), in the field of communication, the authors are listed in Table 4 by taking the "number of publications" data. Michael Hameleers, who works in the field of Political Communication & Journalism, and in areas such as populism and fake news at the University of Amsterdam, stands out. Hameleers' 66 works have received 848 citations in total. Hameleers' work published in Journalism titled "Disseminating information or advocating peace? Journalists' role perceptions in the face of conflict" has received eight citations in 2021 alone.

Neta Kligler-Vilenchik, who continues her academic studies at the Hebrew University of Jerusalem, stands out as the second most popular author during this research period. Working in new/social media, youth, political participation, popular culture, Kligler-Vilenchik has published works in leading communication journals, including Journal of Communication, New Media & Society, International Journal of Communication, Social Media + Society, and Computers in Human Behavior.

Table 4 Top 10 Authors with the Most Publications in the Research Period and their Activities

	AUTHOR NAME	NUMBER OF PUBLICATIONS	WEB OF SCIENCE TOTAL CITATIONS	WEB OF SCIENCE H-INDEX	GOOGLE SCHOLAR TOTAL CITATIONS	GOOGLE SCHOLAR H-INDEX
1	Hameleers, M.	15	60	4	848	13
2	Kligler-Vilenchik, N.	8	14	2	1299	20
3	Guo, L.	7	40	3	2586	24
4	Ling, R.	7	20	3	16137	50
5	Matthes, J..	7	35	3	13878	52
6	Van Der Meer, T.	7	42	3	1004	17
7	Baden, C.	6	9	2	765	13
8	Boulianne, P.	6	27	3	3476	17
9	Hargittai, E.	6	12	2	27960	59
10	Helberger, N.	6	13	3	2774	29

Lei Guo, who has published more than 30 research articles in leading peer-reviewed journals such as *Journal of Communication*, *Communication Research*, and *Journalism & Mass Communication Quarterly* and is currently continuing his academic studies at Boston University, examines the scope and effectiveness of international news on COVID-19. He is also the manager of the "Communicating COVID-19" project (Boston University, 2021). While Lei Guo's a total of 56 works of his, have received 2598 citations.

The ranking of publications in the designated journals during the period when data was taken for this research, in terms of the institutions of authors, is shared in Table 5. Looking at the ranking in Table 5, it is seen that the University of Amsterdam is well ahead. In the QS World University Ranking (2020), the University of Amsterdam has been selected as the best in the world in "Communication & Media Studies" for the last four years. In the list of the top 10 authors and their activities in the last two years (Table 4), Michael Hameleers from the University of Amsterdam is first, while Toni van der Meer is sixth.

	INSTITUTION/UNIVERSITY NAME	NUMBER OF ARTICLES
1	University of Amsterdam (Netherlands)	100
2	University of Illinois (United States)	52
3	University of Oxford (United Kingdom)	52
4	University of Texas (United States)	49
5	Northwestern University (United States)	42
6	Hebrew University of Jerusalem (Israel)	39

7	Michigan State University (United States)	38
8	University of Zurich (Switzerland)	38
9	University of California, Santa Barbara (United States)	35
10	University of Michigan (United States)	32

Many international projects are carried out in the Communication & Media Studies department of the University of Amsterdam, including "EU Horizon 2020" projects and The European Research Council (ERC) grants (University of Amsterdam News, 2021). The staff of the same department also received the 2020 best article award of the Journal of Advertising. Furthermore, the Department of Communication & Media Studies is the only department where the University of Amsterdam ranks first in the QS World University Ranking (2020).

When 1613 works determined within the framework of the research aim are examined in terms of keywords/word groups, the results are shown in Table 6.

Table 6 The Most Frequently Repeated Word/Word Groups in the Keywords of Studies Conducted during the Research Period

KEYWORDS	FREQUENCY	KEYWORDS	FREQUENCY
Social media	301	Trust	37
Journalism	123	Surveillance	36
News	93	Misinformation	35
Twitter	67	COVID-19	31
Internet	67	Political communication	31
Facebook	63	Activism	30
Privacy	60	Fake news	29
Gender	55	Algorithms	27
Instagram	53	Digital media	26
Platforms	48	Content analysis	25
Identity	47	Youtube	24
Disinformation	39	Selective exposure	23
Big data	38	China	23

Since all of the 1613 works determined for the research are in the field of communication, when the "keywords" used in the works were analysed, the concepts of "social media," "journalism," "news" came to the fore. In the keyword ranking, the general conceptual definitions of the field are followed by social media platforms such as "Twitter," "Facebook," and "Instagram." The fact that concepts such as "privacy," "identity," "disinformation," "trust," "misinformation" come to the fore after general concepts

and social media platforms, which are an essential part of life activities today, shows that the concept and the media used are the subjects of research from a "different" perspective.

After 1613 works produced in the designated journals in the last two years related to the field of communication have been evaluated within the framework of different criteria, in the next stage, the works on COVID-19 among these works will be examined within the framework of the same criteria.

Findings of COVID-19 during the research period

During the COVID-19 pandemic process determined for the research (January 1, 2020 - April 20, 2021), the number of works on COVID-19 among 1613 articles in the Q1 rank in the field of communication and journals with the highest impact factor was determined.

During the period determined for the research, 25 (70%) of 36 works on COVID-19 were found to be in the journal "Social Media + Society." Although a special issue on COVID-19 was not published in the journal "Social Media + Society," it is seen that 22 works on the subject were published in Volume 6 Issue 3 of the journal. "Social Media + Society" journal, with 25 works, is followed by "Big Data & Society" journal with five works. These two journals are followed by the journals "New Media & Society" and "Digital Journalism," with two articles and "Mass Communication and Society" and "International Journal of Press-Politics" with one article. The first 11 works are listed from large to small according to the number of WoS TC (Table 7).

Table 7 Works on COVID-19 and Numbers of Citations during the Research Period

	PUBLICATIONS	JOURNAL NAME	WEB OF SCIENCE TOTAL CITATIONS	GOOGLE SCHOLAR TOTAL CITATIONS
1	Liang, F. (2020). COVID-19 and health code: How digital platforms tackle the pandemic in China. DOI: 10.1177/2056305120947657	Social Media and Society	4	10
2	Hargittai, E. Nguyen, M.H., Fuchs, J., Gruber, J., Marler, W., Hunsaker, A. & Karaoglu, G. (2020). From zero to a national data set in 2 weeks: Reflections on a COVID-19 collaborative survey project. DOI: 10.1177/2056305120948255	Social Media and Society	4	2
3	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. DOI:10.1177/2056305120948255	Social Media and Society	4	0

4	Frith, J. & Saker, M. (2020). It is all about location: Smartphones and tracking the spread of COVID-19. DOI: 10.1177/2056305120948257	Social Media and Society	3	10
5	Lewis, S.C. (2020). The objects and objectives of journalism research during the coronavirus pandemic and beyond. DOI: 10.1080/21670811.2020.1773292	Digital Journalism	3	8
6	Milan, S. & Treere, E. (2020). Tre The rise of the data poor: The COVID-19 pandemic seen from the margins. DOI: 10.1177/2056305120948233	Social Media and Society	3	7
7	Vitak, J. & Zimmer, M. (2020). More than just privacy: Using contextual integrity to evaluate the long-term risks from COVID-19 surveillance technologies. DOI: 10.1177/2056305120948250	Social Media and Society	3	4
8	Olsen, R. K., Pickard, V. & Westlund, O. (2020). Communal news work: COVID-19 calls for collective funding of journalism. DOI: 10.1080/21670811.2020.1763186	Digital Journalism	2	9
9	Taylor, L. (2020). The price of certainty: How the politics of pandemic data demand an ethics of care. DOI: 10.1177/2053951720942539	Big Data & Society	2	7
10	Vallee, M. (2020). Doing nothing does something: Embodiment and data in the COVID-19 pandemic. DOI: 10.1177/2053951720933930	Big Data & Society	2	4
11	Vicari, S. & Murru, M.F. (2020). One platform, a thousand worlds: On twitter irony in the early response to the COVID-19 pandemic in Italy. DOI: 10.1177/2056305120948254	Social Media and Society	2	4

The work by Liang (2020) was the most cited. The author continues his academic work at the University of Michigan. In addition, the Department of Communication and Media Research at the University of Zurich has been selected as the 11th best in the world in its field in the QS World University Ranking (2020). The work of Hargittai et al. (2020), Hargittai also serves as the head in the relevant department, is the second most cited work. The work is one of the outputs of a project carried out by Hargittai and his team, which is a cross-cultural study dealing with topics such as how the COVID-19 pandemic affects interpersonal communication, how people follow the rules, and the health advice of political authorities, and how people cope with household conditions.

The third-place work from the citation ranking is another output of the abovementioned project, which also provided the production of the second-place work. This work, produced by the same team, was also published in the same volume and issue of the same journal as the second-place work. In this work, whether people are changing their use of digital media to reach their friends and family is dealt with by examining voice and video calls, text messaging, social media, and online games. 7 of the 11

works on COVID-19 and received the most citations were found to be in the same issue of the "Social Media + Society" journal.

In the authors' analysis, the works produced from the project's outputs were conducted by the faculty members of the Communication and Media Research Department of the University of Zurich, under the chairmanship of the department head Eszter Hargittai were determinant. Table 8 shows the distribution of 36 works by author activity.

Table 8 Top 8 Authors and their Activities on COVID-19 during the Research Period

	AUTHOR NAME	NUMBER OF PUBLICATIONS	GOOGLE SCHOLAR TOTAL CITATIONS	GOOGLE SCHOLAR H-INDEX
1	Hargittai, E.	3	28021	59
2	Hunsaker, A.	3	781	13
3	Nguyen, M.H.	3	165	7
4	Marler, W.	3	59	3
5	Fuchs, J.	3	34	3
6	Gruber, J.	3	26	3
7	Kligler-Vilenchik, N.	1	1299	20
8	Hameleers, M.	1	844	13

Eszter Hargittai, who is in the first place, produces works in areas such as digital literacy, digital inequality, and online learning. Hargittai's works on topics such as social implications of the internet, digital divide, and digital inequality received more than two thousand citations, reaching a total of 28.021 citations. Hargittai has also produced two works in 2021 related to COVID-19.

In Table 9, the most productive universities in the studies on COVID-19 are listed.

Table 9 Most Productive Universities in Studies on COVID-19 during the Research Period

	INSTITUTION/UNIVERSITY NAME	NUMBER OF ARTICLES
1	University of Zurich (Switzerland)	6
2	University of Oxford (United Kingdom)	6
3	University of Sheffield (United Kingdom)	2
4	Goldsmiths, University of London (United Kingdom)	2
5	University of Amsterdam (Netherlands)	2

The fact that the project team dealing with the communication dimension of the COVID-19 pandemic process is a part of the University of Zurich makes the institution stand out in the productive universities category, and it can be seen in Table 9.

The results of the analysis on "keywords" of researches on COVID-19 in the field of communication are shared in Table 10.

Table 10 The Most Frequently Repeated Word/Word Groups in the Keywords of Studies on COVID-19 during the Research Period

KEYWORDS	FREQUENCY	KEYWORDS	FREQUENCY
COVID-19	31	Journalism	2
Misinformation	8	Feminism	2
Social media	8	Trust	2
Coronavirus	6	Policy	2
Contact tracing	5	Quarantine	2
Digital communication	4	References	2
Pandemic	3	Revenue	2
Privacy	4	Social connection	2
Twitter	4	Survey	2
Public	4	Visual media	2

As can be seen in Table 10, the keywords "COVID-19", "Coronavirus," and "Social media" are expected to stand out. The remarkable result here is that the keyword "misinformation" stands out as much as "Social media." Another keyword that stands out is "Contact tracing."

CONCLUSION AND EVALUATION

Pandemics have led individuals and societies to fear, panic, and anxiety in every period, as in historical processes. A pandemic, such as COVID-19 that requires "*separation*" from social life may cause the parties to lose communication ties at the interpersonal and institutional level, and individuals may feel alone, helpless and hopeless. In extraordinary times such as the pandemic, highlighting the discipline of communication, whose aim is to set the agenda, will be a critical step for individuals and societies to get through these periods with the minimum damage.

This study aims to analyse to what extent communication can fulfill its critical role, that is, the positions of the publications in the field of communication during the COVID-19 pandemic. For this purpose, taking data from the pandemic period (January 1, 2020 - April 20, 2021), the top 20 journals with the highest Q rank and impact factor were subjected to bibliometric analysis through the R programming language.

During the pandemic process, 1613 works were analysed in 20 journals with high impact factors published in the field of communication. As a result of the research, it was determined that only 36 of

1613 works, which is 3% of the works, had COVID-19 as a subject. Therefore, when these 36 works on COVID-19 are examined in detail, the works can be evaluated in two basic categories.

The first category includes studies focused on methods of combating epidemics during the COVID 19 pandemic and primarily focused on the disinformation produced about vaccines. These studies discuss the effects of disinformation circulated through social networks and WhatsApp groups on the fight against the epidemic. Works in this category can be defined as an "infodemic" effect. "Infodemi," a concept inspired by the word "pandemic," which means an epidemic, defined by the World Health Organization (WHO), can be defined as inaccurate and sensational news that often arouses interest, concern, and panic. In these works, the effects of infodemic news, which are circulated through social media and communication tools, on the preferences of individuals are examined. Along with the pandemic process, studies on disinformation that increase xenophobia towards East Asian viewers can also be evaluated in this category. At the 2020 Munich Security Conference held on February 14-16, WHO Director-General Tedros Adhanom Ghebreyesus said, "We're not just battling the virus, we are also battling the infodemic" (WHO, 2020, p.2). This explanation emphasizes the importance of the studies in this category. Communication comes to the forefront with its "agenda-setting power" in periods when uncertainty and fear come to the fore, such as pandemics. The infodemic effect of non-expert statements and non-scientific speculative evaluations shows that effective communication and information sharing between scientists and decision-makers can significantly contribute to public health management in times of increased demand for access to information, such as the pandemic.

In the second category, the works discuss the possible effects of digital platforms developed within the management and coordination of public health services during the COVID 19 pandemic process on public values and privacy issues after the pandemic. Works in this category discuss that digital platforms developed for the management of public health services, in addition to their undeniable benefits during the pandemic process, will cause new ethical problems by triggering negative connotations such as obscurity, uncertainty, and insecurity after the pandemic. The works discuss the reflections of these platforms, which have made significant contributions to the management of the complex nature of the pandemic, on individual/social life, especially after the pandemic, in the context of privacy and ethics. The works bring a criticism that these platforms can turn into control mechanisms

that control the daily lives of individuals/society and that they will pave the way for individual information such as privacy, security, and personal data to be accessible, manageable, and directable.

In institution-based analyses, the Communication & Media Studies department of the University of Amsterdam stands out in general communication, and the Communication and Media Research department of the University of Zurich stands out in works on COVID-19. In the "QS World University Ranking," where universities and departments in the world are evaluated and ranked with criteria such as the number of publications, h-index, and academic reputation, the Communication & Media Studies department of the University of Amsterdam has been chosen as the most successful department in the world. The department has hosted many national and international projects, and its academic staff has received awards in many fields (University of Amsterdam News, 2021). Whether the department's continuing achievements carry itself to the position of "*school (Chicago School, Frankfurt School)*" in the field of communication, as in the discipline of economics, maybe a matter of research.

The Communication & Media Studies department of the University of Amsterdam and the Communication and Media Research department of the University of Zurich are successful examples of how "*institutional climate*" is more effective in academic production than "*individual efforts*."

The effect of "*institutional climate*" in literary production can also be seen in author analysis. Given the research period, the fact that 40% of the top 10 authors in the field of general communication came out only from the University of Amsterdam and in the author analysis of the works on COVID-19 in the same period, the fact that 75% of them came out from the University of Zurich confirms this "*inference*."

If it is necessary to make a general evaluation, a project with "*outputs*" prepared by the institution's departments dominates the studies regarding the area. Excluding the "*outputs*" of the project prepared by the department at the University of Zurich, it is seen that only a few individual studies have been conducted on the COVID-19 issue. Thus, the role of the "*institutional climate*" in literary production emerges very clearly, and it contributes significantly to both the institution's institutional success and the academic staff.

Extraordinary periods, such as pandemics, cause significant changes in the life-related activities of individuals and societies. Depending on the perception of these changes, economic, sociological, and psychological consequences are inevitable. Close cooperation of related parties is of great importance in

minimizing these results. Extraordinary periods are the periods in which "*information pollution*" results have a "*multiplier effect*." For this reason, it is essential for both individual and social benefits that especially public authorities and experts of the related fieldwork, in close cooperation with the field of "*communication*" in order to prevent "*incorrect information*" from creating "*false perception*."

Research Constraints

Due to the density of journals with high impact factors, especially those in the Q1 rank in academic literature, the relative length of the approval and publication times of the works appears as essential constraints of the research. Again, this situation creates a constraint as the analysis was carried out in only 20 relevant academic journals with a high impact factor. Furthermore, excluding other academic journals with a lower impact factor and the inclusion of only articles in the analysis led to a decrease in explanatoriness on the subject. Finally, the necessity of database restrictions for bibliometric analyses limits the inferences regarding the research results to the selected databases.

Suggestions

Decision-makers in academic institutions need to consider that the "*institutional climate*" is essential for institutional success and take steps towards this. "*Outputs*" of the department-based projects etc., are activities that have both institutional and individual effects. Therefore, encouraging department-based activities and providing the necessary support can be seen as the key to success.

As can be seen in the success of the Communication & Media Studies department of the University of Amsterdam, it is necessary to encourage collaborations that require interdisciplinary studies such as "*artificial intelligence*" and "*classical*" field and theory studies.

The communication literature can be evaluated in the context of '*paradigms*,' and the underlying reasons for not showing interest in the "*current*" and the "*urgent*" can be examined. With this examination, the dominant perception, theory, and approach in the field of communication can be examined in their periodic dimensions, and the reaction of literary productions to important historical frictions/events (war, epidemic, economic crisis, etc.) can be revealed. The historical process can offer different perspectives to see the big picture.

This research was carried out on the works considered to guide the field and are included in the 20 most influential journals. Undoubtedly, the works produced in the field of communication are much more than this sample. Therefore, this research can be expanded by expanding the sample, i.e., taking data from all Q categories (Q1, Q2, Q3, Q4). In this way, studies on COVID-19 in the field of communication can be evaluated from a broader perspective.

GENİŞLETİLMİŞ ÖZET

2019'un son aylarında Çin'de başlayan yeni tip koronavirüs (COVID-19) salgını, 11 Mart 2020 tarihinde Dünya Sağlık Örgütü tarafından pandemi olarak ilan edilmesiyle birlikte küresel boyut kazanmıştır. Bu sürecin bireylere getireceği olumsuzlukları azaltmak ve onlara yol göstermek, toplumla bağ kurulmasını ve doğru bilgilendirilmesini sağlayabilmek iletişim araçlarının doğru kullanılması ile mümkündür. İletişim disiplininin etkileme, bilgilendirme ve yönlendirme niteliği, bireylerin ve toplumların olağanüstü dönemlerde, fiziksel, düşünsel ve ruhsal pozisyonları üzerinde belirleyici güce sahip olabilmektedir. Bu çalışmada, pandemi gibi olağan üstü bir dönemde, iletişim disiplininin bu gücünü ne kadar icra ettiği, üretilmiş akademik eserler üzerinden değerlendirilmesi amaç edinilmiştir. Bu amaç kapsamında COVID-19 pandemi sürecinde iletişim alanına yön veren dergilerde yayımlanan uluslararası makalelerde ağırlıklı olarak hangi konularla ilgili çalışmalar yapıldığı ve bu çalışmaların ne kadarının COVID-19 ile ilgili olduğu bibliyometrik analiz yöntemi aracılığıyla incelenmiştir.

Bu araştırmada iletişim disiplininin, 'önemli' ve 'güncel' olaya karşı duyarlılığı, iletişim alanında Q1 kategorisinde yer alan ve etki faktörü en yüksek ilk 20 dergide yayımlanan 1613 eser üzerinden değerlendirilmiştir. COVID-19 pandemi süreci olarak 1 Ocak 2020- 20 Nisan 2021 döneminde, Web of Science veri tabanında uluslararası atıf indekslerinde taranan makalelerin analizinde bibliyometrik yöntem kullanılmıştır. Araştırma kapsamında incelenen eserlerin temel bilgileri, atıf sayıları, en fazla yayına sahip yazarlar, alana en fazla katkı sağlayan kurumlar/üniversiteler ve eserlerin anahtar kelime analizlerinden hareketle alanın yoğunlaştığı çalışma konularına dair veriler paylaşılmıştır.

Pandemi sürecinde, iletişim alanında yayınlanan, etki faktörü yüksek 20 dergide toplam 1613 eser analize konu edilmiştir. Araştırma sonucunda, 1613 eserden sadece 36 tanesi, yani %3'ü, COVID-19'u konu olarak edindiği tespit edilmiştir. COVID-19'un konu edinilen 36 eser detaylı olarak incelendiğinde, eserler iki temel kategoride değerlendirilebilir. Birinci kategoride, COVID 19 pandemisi

sürecinde salgınla mücadele yöntemleri ve özellikle aşılara ilgili üretilen dezenformasyonu konu edinen çalışmalar yer almaktadır. Bu çalışmalarda, sosyal ağlar ve WhatsApp grupları üzerinden dolanımına sokulan dezenformasyonun salgınla mücadeleye olan etkileri konu edinmektedir. Bu kategorideki eserler “infodemik” etki olarak tanımlanabilir. Pandemi gibi bilgiye ulaşma isteğinin arttığı dönemlerde, konunun uzmanı olmayan ilgililerin açıklamaları ve bilimsel olmayan spekülasyonların infodemik etkisi dikkate alınmalıdır. Bilim insanları ile karar vericiler arasındaki etkili iletişim ve bilgi paylaşımı halk sağlığı yönetimi açısından son derece önemlidir. İkinci kategoride; COVID 19 pandemisi sürecinde halk sağlığı hizmetlerinin yönetilmesi ve koordinasyonu çerçevesinde geliştirilen dijital platformların pandemi sonrası kamusal değerler ve mahremiyet konularına olası etkilerinin tartışıldığı eserler yer almaktadır. Bu kategorideki eserlerde geliştirilen dijital platformların, pandemi sürecinde yadsınamayacak yararlarının yanında, pandemi sonrasında bilinmezlik, belirsizlik ve güvensizlik gibi olumsuz çağrışımları tetikleyerek yeni etik sorunların oluşmasına neden olacağı tartışılmaktadır. Eserlerde, pandeminin karmaşık doğasının yönetilmesinde önemli katkıları olan bu platformların özellikle pandemi sonrasında bireysel/toplumsal yaşama yansımaları mahremiyet ve etik bağlamında tartışılmaktadır. Eserlerde pandemi sonrası bu platformların bireylerin/toplumların gündelik yaşamlarını kontrol eden birer denetim mekanizmalarına dönüşme potansiyellerinin olması, mahremiyet, güvenlik ve kişisel veri gibi bireylere özgü enformasyonları erişilebilir, yönetilebilir ve yönlendirilebilir olmasına zemin hazırlayacağı eleştirileri getirilmektedir.

Kurum temelli analizlerde, genel iletişim alanında Amsterdam Üniversitesi'nin İletişim ve Medya Çalışmaları bölümü ile COVID-19'la ilgili çalışmalarda ise Zürih Üniversitesi'nin İletişim ve Medya Çalışmaları bölümü öne çıkmaktadır. Söz konusu üniversiteler akademik alana ilişkin üretimde, “bireysel çabalardan” daha çok “kurum ikliminin” daha etkili olduğuna dair başarılı birer örnektir. Akademik üretimde ‘kurum iklimi’ etkisi, yazar analizlerinde de görülebilir. Araştırma dönemi veri alındığında, genel iletişim alanında en fazla yayın yapan ilk 10 yazarın %40'nın sadece Amsterdam Üniversitesi'nden aynı dönemdeki COVID-19 konulu eserlerin yazar analizinde ise %75'inin Zürih Üniversitesi'nden çıkması bu ‘çıkarımı’ doğrular niteliktedir.

Analiz çerçevesinde incelenen 1613 eserde yer alan anahtar kelimelere ilişkin analiz sonuçları incelendiğinde, “social media”, “journalism”, “news”, “Twitter”, “Facebook” ve “Instagram” kavramların ön plana çıktığı görülmüştür. Genel kavramlar ve günümüzde yaşam etkinliklerinin önemli bir parçası olan

sosyal medya platformlarından sonra, "privacy", "identity", "disinformation", "trust", "misinformation" gibi kavramlar yer almıştır. COVID-19 ile ilgili çalışmalarda ise "social media", "misinformation" ve "contact tracing" kavramları ön plana çıkmıştır. İnternet ve onun önemli çıktılarında olan sosyal medya ve dijital platformların COVID-19 pandemisinde ve sürecin takibinde kullanılan önemli araçlardan olduğu düşünülmektedir.

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