

COMMUNICATION TRENDS AND STRATEGIES CRISIS MANAGEMENT ON SOCIAL MEDIA

The ubiquitous use of social media is forcing organizations to develop dialogic and interactive crisis communication strategies capable of dealing with increasingly systemic and frequent crises. Crisis communication must not only provide information, but also address the emotional needs of the audience, helping to effectively manage fears, concerns and negative emotions. The value of working with local authorities is important, as is identifying opinion leaders who can act as strategic allies in disseminating messages. The study provides useful tools for developing effective crisis communication strategies, strengthening organizational resilience, protecting corporate reputation and maintaining public trust.

SOCIAL MEDIA//COMMUNICATION//STRATEGY//BIBLIOMETRIC ANALYSIS



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INTRODUCTION

Multiple aspects of daily life are now governed by social media. Initially conceived as a tool for cultivating personal relationships, over time functionalities have multiplied, enabling new ways of relating, communicating, and sharing information and opinions (Austin and Jin, 2018). Social media use continues to grow exponentially, now counting 4.76 billion users worldwide, or just under 60 percent of the world's population (We are Social, 2023).

This development has led to a significant acceleration in the global dissemination of information online (Wassler et al., 2022), a particularly critical phenomenon during crises and emergencies. In these contexts, the presence of multiple voices and narratives can amplify

confusion and anxiety in the public (Iannacone, 2021), as demonstrated during the recent Covid-19 pandemic (Wassler et al., 2022). To avoid these negative outcomes, social media must be integrated into corporate communication plans and strategies in order to quickly and effectively address critical situations (Perry et al., 2003; Roy et al., 2020). Indeed, social media is an essential tool in emergency management (Maal and Wilson-North, 2019; Mavrodieva and Shaw, 2021).

The crisis communication landscape has become much more complex than in the past, as social media has made communication between organizations and the public much more dynamic and interactive (Austin and Jin, 2016). These platforms have created new spaces for online discussion and debate, where audiences can freely express their ideas, opinions, and emotions (Arpan and Roskos-Ewoldsen, 2005). In this context, crisis communication links the messages sent by the organization in question and immediate responses from the public (Palen et al., 2007; Wright and Hinson, 2009), which has taken a much more active role in the debate, using social media such as Facebook, X and blogs to communicate during crisis situations (Paul and Das, 2022).

In addition to intensifying public involvement and transforming citizens into active participants, new information and communication technologies (ICTs) have triggered deep interdependence that bridges great distances. This phenomenon is accelerating the spread of the effects of crises and exacerbating vulnerability (Owen, 2015), as evidenced by recent events such as the Covid-19 pandemic, socio-political polarizations, and climate-related concerns (Hafez and Grüne, 2022).

Social media can be used to fulfill multiple needs during a crisis, such as the need to obtain information (Sutton et al., 2008) or the desire to freely express one's ideas and opinions to find emotional support (Cheong and Morrison, 2008; Kaye, 2005; Seltzer and Mitrook, 2007). To meet these needs, organizations must open a dialogue with the public, using a combination of different social media (Romenti et al., 2014). However, while

these platforms can prove to be a valuable ally in crisis management, they are also fertile ground for the emergence of crises themselves: events that begin as single incidents can grow exponentially online, fueled by public debate (Austin and Jin, 2018; Queensberry, 2020). This means that in the digital context, preventing, preparing for, and monitoring online conversations by organizations are increasingly important activities to prevent an isolated threat from escalating into a crisis. To sum up, social media can present both new opportunities and new challenges for organizations, depending on how it is managed (Cheng, 2018): it can facilitate interaction with the public and foster the creation of relationships based on transparency and trust (Jin and Liu, 2010), or become a source of misinformation and proliferate online rumors, amplifying the potential negative effects of a crisis (Wigley and Fontenot, 2010).

Studies of social media and crisis communication have evolved over the years to home in on investigating the role they play in managing different types of emergency situations that have occurred over time (Schultz et al., 2011; Utz et al., 2013). As the research in this area is rather fragmented and uneven, our study adopts a bibliometric analysis in order to comprehensively map the existing literature, highlighting the main lines of research and areas for future study. This approach is particularly relevant given the topicality of the issue. The above considerations give rise to the following research questions:

RQ1: What are the main trends in publications on crisis communication and social media?

RQ2: What are the main research strands that are addressed in the literature?

First, our study provides an in-depth overview and assessment of the scientific literature that has been produced on the topic over time. Useful insights and recommendations are also provided for managers and decision makers manage crisis communication in an effective, timely manner, preserving public reputation and trust and

ensuring organizational resilience.

The paper opens with a description of the methodology adopted for data collection and analysis. Next, the results that emerged from the performance analysis and scientific mapping are presented, followed by a discussion. We continue by identifying theoretical queries and future research areas, and offer an overview of managerial implications, finally concluding with a reflection on the limitations of the study.

METHODOLOGY

Data collection

The study adopts bibliometric methodology, a type

of analysis that has gradually gained ground in business studies (Donthu et al., 2021; Khan et al., 2021) because it allows for handling substantial quantities of scientific data and producing research of great utility and impact (Donthu et al., 2021). As it is highly objective, this methodology is considered more reliable and unbiased in synthesizing large volumes of information and evaluating performance (Baker et al., 2021b; Nerur et al., 2008); other techniques in comparison are more subjective and as such, more prone to bias (Donthu et al., 2021; Lim and Zhang, 2022).

In addition to mapping the existing literature and assessing its scientific impact, bibliometric analysis is particularly useful in providing an overview of research developments and identifying

FIGURE 1 SPAR-4-SLR PROTOCOL (PAUL ET AL., 2021)

ASSEMBLING:

Identification

Research Aims: Study Performance and Intellectual Structure of Crisis Communication and Social Media

Domain: Crisis Communication

Source Type: Journals

Source Quality: Scopus

Acquisition

Search Query: (TITLE-ABS-KEY ("crisis communication") AND TITLE-ABS-KEY ("social media"))

Total Documents returned from the assembling stage: 825 documents



ARRANGING

Organization

Organization Codes: Subject Area, Document Type, and Language

Purification

Subject Area: Social Science; Business, Management, and Accounting; Economics, Econometrics, and Finance; Decisions Sciences.

Document Type: Final Article;

Language: English.

Total Documents retained from arranging stage: 420 documents



ASSESSING

Total Documents: 420 documents;

Performance Analysis: Analysis of publication and Citation Trend;

Analysis: Bibliographic Coupling and Keyword Co-Occurrence Analysis;

Software: Biblioshiny in R and VOSviewer.

evolutionary trends and significant gaps (Mukherjee et al., 2022b). With regard to future research trends, bibliometric analysis reveals areas and domains that are still under-explored and of particular interest to the scientific community by analyzing small changes and patterns in the number of publications, collaborations, and citations (Kozłowski et al., 2017; Mukherjee et al., 2022a). In light of these considerations, we adopted this methodology to summarize large amounts of data so as to provide a comprehensive overview of the established intellectual structure and emerging trends on the topic in question (Donthu et al., 2021).

Bibliometric analyses require a rigorous and transparent search protocol (Donthu et al., 2021). In this case, our study followed the Scientific Procedures and Rationales for Systematic Literature Review (SPAR-4-SLR) proposed by Paul et al. (2021), which involves three steps (assembly, organization, and evaluation) to define the corpus of documents to be analyzed, as shown in Figure 1.

In the first stage, assembly, we defined the research objectives and decided on the sources and the reference database, (Scopus). The search query applied on Scopus (TITLE-ABS-KEY (“crisis communication”) AND TITLE-ABS-KEY (“social media”)) produced an initial sample of 825 documents.

The second stage, devoted to organization, shows how these papers were filtered using various criteria related to subject areas of interest (Social Science; Business, Management, and Accounting; Economics, Econometrics, and Finance; and Decision Sciences), document type (Final Article), and target language (English). By applying these criteria, we were able to reduce the initial sample to 420 papers.

The resulting corpus of articles was then evaluated in the third phase under the protocol through performance evaluation using Biblioshiny in R and VOSviewer software. This step took into account various bibliometric indicators and scholarly mapping analysis, aimed at deepening the intellectual structure of the reference corpus through keyword co-occurrence analysis and bibliographic coupling.

DATA ANALYSIS

The methodological combination of performance analysis and scientific mapping analysis has been utilized in several previous management studies to obtain broader, deeper observations of the literature (Chandra et al., 2022; Lim et al., 2022). Specifically, the first type of analysis involves the use of various bibliometric indicators to examine the contributions of research on a given topic (Broadus, 1987; Paul et al., 2021), identifying the most prolific authors, top journals, and highest impact articles, as well as publication and citation trends over time (Donthu et al., 2021).

The second analysis, scholarly mapping, on the other hand, allows us to examine the possible relationships between different research contributions (Baker et al., 2021a). This analysis explores the intellectual interactions and diverse connections present in the reference corpus using various techniques, including keyword co-occurrence analysis and bibliographic coupling (Andersen, 2021; Donthu et al., 2021). The combined use of these two techniques allows us to triangulate the data we collected (Chandra et al., 2022; Donthu et al., 2021).

RESULTS

Performance Analysis

Our performance analysis carried out on the selected articles enabled us to assess the productivity and relevance of research on the topic in the scientific literature. As shown in Table 1, the total number of publications (TP) included in the sample is 420, while the total number of publications cited (TCP) is 365. These data indicate that 86.9% of the articles on crisis communication and social media in the sample were cited, underscoring the academic relevance of these contributions.

Research on crisis communication and social media, which began around 2011, is still widespread, with a total of about 14 active years

(NAY) and an average publication rate of 6.09 articles per year (PAY). Regarding citation metrics, the total number of citations (TC) is 11,481, with an average of 27.33 citations per publication (TC/TP). As regards co-authorship metrics, the 420 articles we analyzed were produced by 938 authors (NCA), of which 57 were sole authors (NUA).

TABLE 1 PUBLICATION, CITATION AND COAUTHORSHIP METRICS (PERSONAL ELABORATION)

Publication Metrics	
Total Publications (TP)	420
Total Cited Publications (TCP)	365
Number of active years (NAY)	14
Productivity per active year (PAY)	6.09
Citation Metrics	
Total Citations (TC)	11481
Average citations per publication (TC/TP)	27.33
Coauthorship Metrics	
Number of contributing authors (NCA)	938
Number of unique authors (NUA)	57
Authors of co-authored publications (ACA)	363
Single-authored publications (SA)	13.57
Co-authored publications (CA)	86.43
Collaboration Index (CI)	2.23

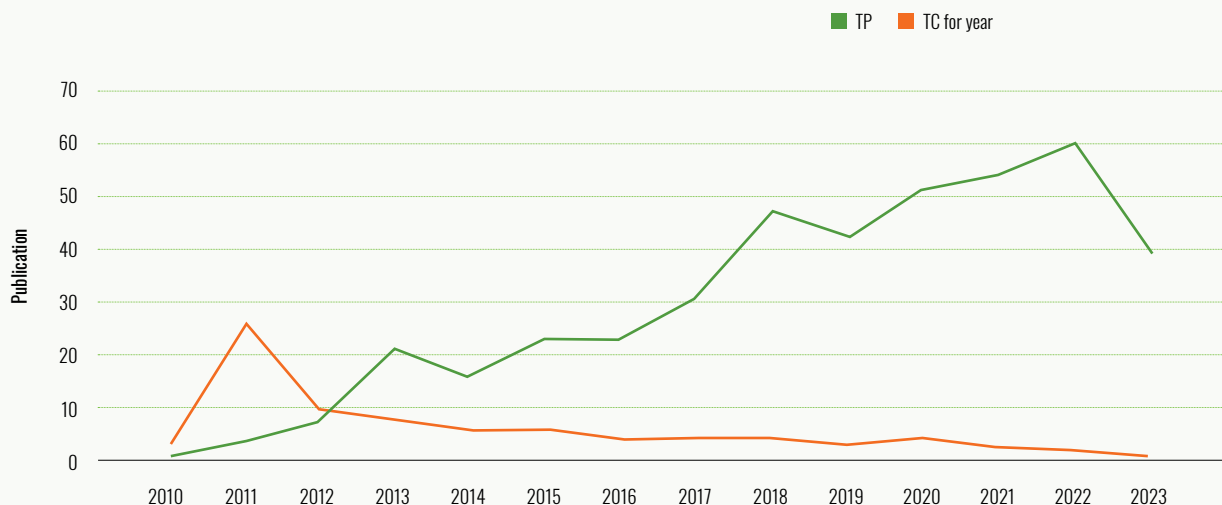
The collaboration index (CI) is 2.23, suggesting that each author collaborated on average with about 2.23 co-authors, an interesting figure to study the dynamics of collaboration and networks developed around the topic.

Figure 2 shows the time trend of publications in the field of crisis communication and social media, showing a significant increase over the period in question, with a peak of 60 articles published in 2022. In contrast, the number of citations per year shows a decreasing trend, with the highest value recorded in 2011 (about 26.46 citations per article) compared to an overall average of 6.09 citations.

Table 2 shows the most prolific authors in the field of crisis communication and social media. Topping the list in terms of total number of publications (TP) is Jin Y., with 13 articles, followed by Liu B.F., with 12 articles, and Wang Y., with 10 articles. Jin Y. and Liu B.F. are among the pioneers in this field of research, having started publishing in 2011 and 2020, respectively. In terms of average citations, Veil S.R. stands out with an average of 164 citations for 4 publications, surpassing even Jin Y. and Liu B.F.

Considering the most prolific authors, the most productive countries are the United States and China, while those with the most citations

FIGURE 2 TOTAL PUBLICATION AND TOTAL CITATION FOR YEAR (PERSONAL ELABORATION)



are the United States, the United Kingdom, the Netherlands, China and Australia.

Table 3 shows the most prolific and impactful journals on the topic at hand. One of the most productive journals is Public Relations Review, with a total of 64 published articles (TP), followed by the Journal of Contingencies and Crisis Management, with 21 articles, and the Journal of Communication Management, with 15.

Intellectual structure

Scientific mapping analyses aim to explore the intellectual structure developed around a given topic. For this purpose, keyword co-occurrence analysis and bibliographic coupling analysis were conducted. The former leads to the definition of clusters based on keyword similarity, while the latter groups articles based on the similarity

of reference sources (Donthu et al., 2021). The combination of the two allows for triangulation and convergence of the main themes that emerged from the literature (Chandra et al., 2022), underscoring the fixed points in the field of study.

Co-occurrence analysis of keywords on VOSviewer

Keyword co-occurrence analysis studies the intellectual structure of a field by mapping the keywords that each author attributes to publications. This analysis allows the creation of clusters, composed of different keywords, that detect the presence of certain themes within the sample (Lim et al., 2022). Keyword co-occurrence analysis is based on the principle that the simultaneous mention of certain keywords in different papers suggests a close correlation between the underlying concepts, thus helping to define a particular

TABLE 2 MOST PROLIFIC AUTHORS FOR CRISIS COMMUNICATION AND SOCIAL MEDIA (PERSONAL ELABORATION)

Authors	Author Affiliation	TP	TC	TC/TP	h-index	g-index	START PY
Jin Y	University of Georgia, Athens, United States	13	1614	124	12	13	2011
Liu BF	University of Maryland, College Park, College Park, United States	12	1525	127	12	12	2010
Wang Y	Wuhan University, Wuhan, China	10	139	14	6	10	2016
Mirbabaie M	Universität Paderborn, Paderborn, Germany	8	270	34	7	8	2018
Stieglitz S	Universität Potsdam, Potsdam, Germany	8	483	60	7	8	2013
Pennington-Gray L	University of South Carolina, Columbia, United States	7	299	43	7	7	2013
Zhao X	The University of North Carolina at Chapel Hill, Chapel Hill, United States	6	154	26	5	6	2018
Luo Q	Sun Yat-Sen University, Guangzhou, China	5	175	35	4	5	2017
Pang A	Singapore Management University, Singapore City, Singapore	5	72	14	5	5	2015
Zhai X	Sun Yat-Sen University, Guangzhou, China	5	175	35	4	5	2017
Zhao H	Lunds Universitet, Lund, Sweden	5	26	5	3	5	2017
Cheng Y	NC State University, Raleigh, United States	4	174	44	4	4	2018
Ehnis C	The University of Sydney Business School, Sydney, Australia	4	204	51	4	4	2018
Lachlan KA	University of Connecticut, Storrs, United States	4	174	44	3	4	2015
Mohamad B	Universiti Utara Malaysia, Sintok, Malaysia	4	29	7	3	4	2016
Spence PR	University of Central Florida, Orlando, United States	4	185	46	3	4	2015
Tse YK	Cardiff Business School, Cardiff, United Kingdom	4	64	16	4	4	2018
Veil SR	University of Nebraska–Lincoln, Lincoln, United States	4	657	164	4	4	2011
Zhan M	The University of Texas at Arlington, Arlington, United States	4	132	33	4	4	2018
Zhang M	University of Bristol, Bristol, United Kingdom	4	96	24	4	4	2018

research topic (Callon et al., 1983). Using the Biblioshiny software in R, the sample of articles was filtered to include only those with a minimum of 50 citations (TC), allowing us to focus only on the most influential and impactful articles. A minimum of 6 co-occurrences was set in the VOSviewer software to reduce the density of keywords shown in the graphical display and make the representation clearer and more readable. This process produced a total of 32 keywords, divided into 5 clusters, as shown in Table 4. The distance of the

keywords in the map decreases as their correlation increases, emphasizing where the belong in relation to specific clusters (Andersen, 2021).

For each cluster, Table 4 shows the main keywords, their links, the strength of those links, and the number of co-occurrences. Figure 3 shows the graphical representation of the keyword co-occurrence analysis obtained on VOSviewer and the assignment of a specific label to each cluster, resulting from reading the documents belonging to the individual clusters.

TABLE 3 MOST PROLIFIC JOURNALS (PERSONAL ELABORATION)

Journals	TP	TC	CABS Rating 2021	ABDC Rank 2022	Scopus H-index
Public relations review	64	3729	NA	A	96
Journal of contingencies and crisis management	21	1043	NA	A	61
Journal of communication management	15	377	1	A	46
Corporate communications	11	225	1	A	66
Corporate reputation review	7	64	1	A	69
International journal of disaster risk reduction	7	56	NA	A	70
Tourism management	7	272	4	A	236
International journal of business communication	5	57	NA	A	58
International journal of strategic communication	5	148	NA	NA	30
Journal of applied communication research	5	494	NA	A	65
Journal of emergency management	5	11	NA	NA	15
Journal of public relations research	5	244	NA	A	59
Communication teacher	4	12	NA	A	13
Frontiers in communication	4	37	NA	C	25
International journal of information management	4	146	2	A	152
Journal of business research	4	99	3	A	236
Journal of international crisis and risk communication research	4	51	NA	NA	NA
Public relations inquiry	4	36	NA	A	16
Sustainability (switzerland)	4	30	NA	A	136
Behaviour and information technology	3	72	2	A	88
Communication and society	3	12	NA	NA	22
Communication and sport	3	84	NA	A	26
Communication quarterly	3	172	NA	A	51
International journal of sport communication	3	17	NA	A	11
Journal of risk research	3	27	2	A	74
Journalism studies	3	57	NA	A	75
Malaysian journal of communication	3	23	NA	NA	12
Newspaper research journal	3	14	NA	NA	30
Social media and society	3	67	NA	A	54
Tourism management perspectives	3	33	2	A	69

CLUSTER 1 Role of social media in crisis management and coping mechanisms to improve resilience

During emergencies, traditional communication channels can suffer severe disruptions, exacerbating the overall crisis situation (Kuo, 2013). In such scenarios, social media can help organizations stay in touch with stakeholders impacted by the crisis by providing information and support to the public. In this case, in addition to facilitating information sharing, social media also promotes social cohesion and emotional support (Perez-Lugo, 2004).

The messages conveyed through social media

can follow five main coping strategies: (1) making sense of the situation, attributing meaning to the incident; (2) coping with reality and responding to the demands that arise from the external situation; (3) establishing contact with family and friends who can offer support in dealing with the crisis and its aftermath; (4) maintaining a reasonable emotional balance, in an attempt to contend with even the strongest feelings; and, finally, (5) preserving self-image, competence, and situational mastery (Moos and Schaefer, 1986). Adopting these mechanisms helps organizations pursue more effective strategies and build up resilience when future crises strike (Cutter et al., 2008).

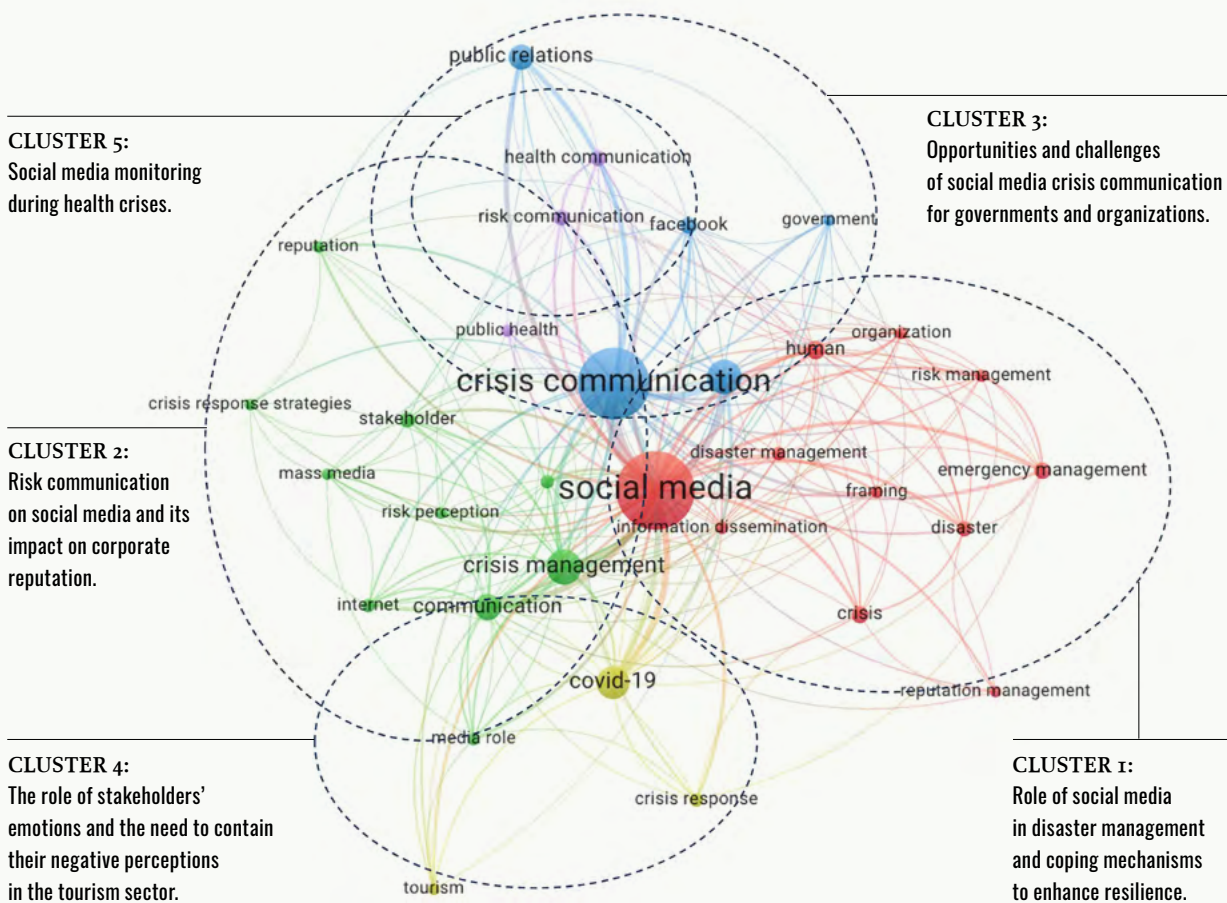
TABLE 4 KEYWORD CO-OCCURRENCE ANALYSIS (PERSONAL ELABORATION)

CLUSTER 1 (Red)	Links	Total Link Strength	Occurrences	CLUSTER 3 (Blue)	Links	Total Link Strength	Occurrences
Crisis	11	25	13	Crisis Communication	31	379	227
Disaster	12	30	10	Facebook	14	39	12
Disaster Management	11	20	8	Government	11	23	6
Emergency Management	10	34	12	Public Relations	11	49	28
Framing	10	20	7	Twitter	27	130	53
Human	19	48	15				
Information Dissemination	14	20	7				
Organization	14	29	7				
Reputation Management	6	10	6				
Risk Management	11	24	7				
Social Media	31	503	272				
CLUSTER 2 (Green)	Links	Total Link Strength	Occurrences	CLUSTER 4 (Yellow)	Links	Total Link Strength	Occurrences
Communication	22	93	31	Covid-19	19	102	48
Crisis Management	25	123	55	Crisis Response	8	19	8
Crisis Response Strategies	7	10	6	Tourism	7	17	6
Internet	12	28	8				
Mass Media	12	19	6				
Media Role	11	25	7				
Reputation	9	19	6				
Risk Perception	12	20	6				
Social Network	15	33	8				
Stakeholder	14	30	10				
CLUSTER 5 (Purple)	Links	Total Link Strength	Occurrences				
Health Communication	10	27	11				
Public Health	11	18	7				
Risk Communication	11	28	11				

In the face of a crisis, organizations must be committed to comprehending and listening to public concerns. If the organization is able to deliver the right messages in response to people's needs, this can help manage public perceptions of risk (Barnett et al., 2011). Effective risk communication must therefore be based first and foremost on understanding the public, with the goal of meeting needs and expectations.

Risk communication practices encompass several preparatory processes, including risk analysis, hazard identification, plan development, and public education (Veil et al., 2011). The latter begins with listening to people's needs and concerns in order to minimize the level of stress typical of crisis situations (Coombs, 2007). In addition, maintaining a good relationship with stakeholders enables organizations to safeguard their corporate image and reputation over time (Veil et al., 2011).

FIGURE 3 KEYWORD CO-OCCURRENCE VISUALIZATION (PERSONAL ELABORATION)



CLUSTER 3 Opportunities and challenges of social media crisis communication for governments and organizations

Social media is a source of numerous opportunities and challenges which must be managed. On the one hand, these platforms enable the dissemination of information in a timely manner, improving public awareness of events. On the other, however, they amplify the complexity of the information landscape due to the overlapping of multiple narratives. National and local governments can leverage social media to communicate more easily and directly with the public during a crisis (Graham et al., 2015). But since the social media audience is highly fragmented (Gonzalez-Herrero and Smith, 2008), a combination of different communication channels must be used to reach as many people as possible (Veil et al., 2011).

Although social platforms provide access to vast amounts of information, this abundance can make it more difficult to understand events. Faced with reams content available online, users find themselves engaged in a process of sense-making in an attempt to interpret and attribute meaning to events (Dervin, 1992). This process, however, is greatly hindered by the circulation of incomplete and inaccurate information online. In such a scenario, identifying reliable data and building a clear picture of the event in question is a particularly challenging task. Some social media, including X, helps users in this dynamic and interactive process of data collection and event interpretation (Fraustino et al., 2017; Van der Meer and Verhoeven, 2013). Nonetheless, discrepancies between different interpretative frameworks of an event can generate confusion, distrust, and negative perceptions in the public. To counter these effects, organizational efforts to align interpretative frameworks can help mitigate potential reputational damage and promote faster business recovery (Liu et al., 2011).

CLUSTER 4 The role of stakeholder emotions and the need to curb negative perceptions in the tourism industry

A salient aspect for organizations is to ensure public satisfaction in order to minimize the risk of negative behaviors toward the company, such as boycotts or critical word of mouth (Herrera and Hoagland, 2006; Parsons and Draheim, 2009). This can occur in a variety of industries, with a particularly intense impact on the tourism and hospitality sectors, where high media coverage fuels online debates and conversations. Therefore, organizations should engage in an ongoing dialogue with the public so as to identify potential negative perceptions and emotions in time to prevent adverse behaviors. Remaining silent in extreme situations can exacerbate the crisis, with severe repercussions in terms of corporate credibility and reputation (Seeger, 2006).

CLUSTER 5 Monitoring social media during health crises

In the context of health crises, which have always been characterized by profound misinformation, confusion, and uncertainty, social media conversations must be monitored by organizations to understand the public's key fears and concerns. Such fears could hinder the adoption of safety protocols and measures recommended by governments and institutions to mitigate the effects of the crisis (Hadi and Fleshler, 2016). Therefore, reducing the uncertainty typical of a health crisis requires building and maintaining public trust over time through the dissemination of accurate, timely information at all stages of the emergency (Avery, 2017; Holmes et al., 2009). In addition, it is important to promote two-way communication capable of responding to the multiple needs of the public (Holmes, 2008). Indeed, symmetrical bi-directional communication helps to establish and consolidate lasting, mutually beneficial relationships between the parties (Dalrymple et al., 2016).

Bibliographic Coupling on VOSviewer

Bibliographic coupling enables us to analyze semantic associations between publications to uncover latent topics and potential future research directions (Donthu et al., 2021). In this case, clustering occurs for similar publications. In the graphical representation, each node corresponds to a document, which can be identified by the name of the authors (Verma and Yadav, 2021). The proximity between nodes and their density underscores a certain homogeneity among publications. Figure

4 illustrates the graphical visualization obtained on VOSviewer by analyzing a corpus of 68 papers, which were subsequently divided into 7 clusters. Each cluster was assigned a label corresponding to the main themes that emerged from reading the different documents.

Table 5 presents a summary of the papers included in each cluster, indicating for each publication the year of release and the number of citations, evidencing the most influential and impactful papers within each cluster.

FIGURE 4 BIBLIOGRAPHIC COUPLING (PERSONAL ELABORATION)

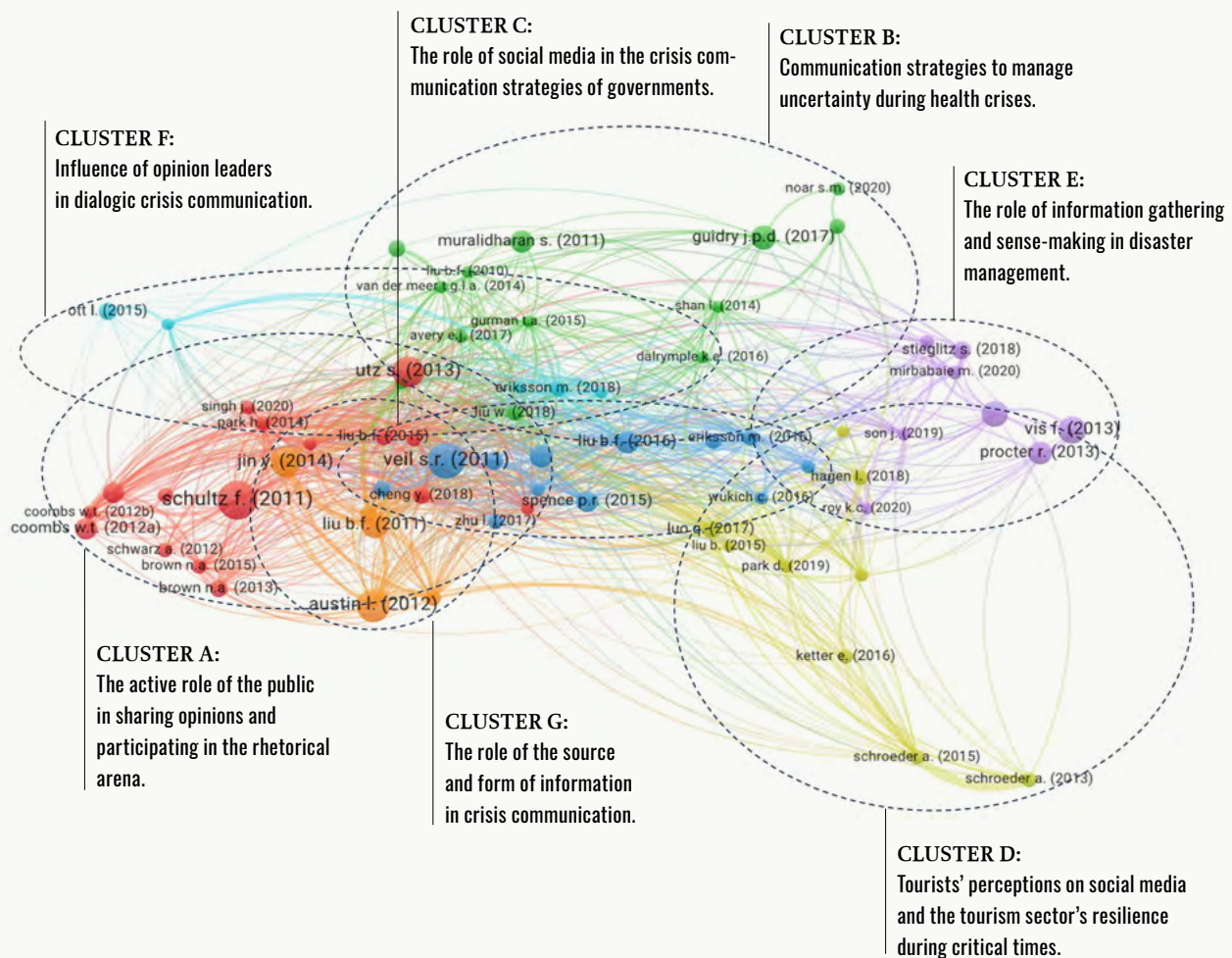


TABLE 5 BIBLIOGRAPHIC COUPLING – CLUSTER DETAILS (PERSONAL ELABORATION)

CLUSTER A (Red)	N. Articles	Authors	Year
The active role of the public in sharing opinions and participating in the rhetorical arena.	1	Brown, N. A., & Billings, A. C.	2013
	2	Brown, N. A., Brown, K. A., & Billings, A. C.	2015
	3	Brummette, J., & Sisco, H. F.	2015
	4	Cheng, Y.	2018
	5	Coombs W.T., & Holladay J.S.	2012
	6	Coombs W.T., & Holladay J.S.	2012
	7	Coombs W.T., & Holladay J.S.	2014
	8	Liu, B. F., Fraustino, J. D., & Jin, Y.	2014
	9	Park, H., & Cameron, G. T.	2014
	10	Schultz, F., Utz, S., & Göritz, A.	2011
	11	Schwarz, A.	2012
	12	Singh, J., Crisafulli, B., & Xue, M. T.	2020
	13	Utz, S., Schultz, F., & Glocka, S.	2013
	14	Van Zoonen, W., & Van Der Meer, T.	2015
	15	Veil, S. R., Sellnow, T. L., & Petrun, E. L.	2012
	16	Zheng, B., Liu, H., & Davison, R. M.	2018
CLUSTER B (Green)	N. Articles	Authors	Year
Communication strategies to manage uncertainty during health crises.	1	Avery, E.J.	2017
	2	Dalrymple, K. E., Young, R., & Tully, M.	2016
	3	Guidry, J. P., Jin, Y., Orr, C. A., Messner, M., & Meganck, S.	2017
	4	Gurman, T. A., & Ellenberger, N.	2015
	5	Liu, B.F.	2010
	6	Liu, W., Lai, C. H., & Xu, W. W.	2018
	7	Muralidharan, S., Rasmussen, L., Patterson, D., & Shin, J. H.	2011
	8	Noar, S. M., & Austin, L.	2020
	9	Romenti, S., Murtarelli, G., & Valentini, C.	2014
	10	Rutsaert, P., Pieniak, Z., Regan, Á., McConnon, Á., Kuttischreuter, M., Lores, M., ... & Verbeke, W.	2014
	11	Shan, L., Regan, Á., De Brún, A., Barnett, J., Van der Sanden, M. C., Wall, P., & McConnon, Á.	2014
	12	Van der Meer, T. G., & Verhoeven, P.	2013
	13	Van der Meer, T. G., Verhoeven, P., Beentjes, H., & Vliegthart, R.	2014
CLUSTER C (Blue)	N. Articles	Authors	Year
The role of social media in the crisis communication strategies of governments.	1	Cho, S. E., Jung, K., & Park, H. W.	2013
	2	Eriksson, M., & Olsson, E. K.	2016
	3	Freberg, K.	2012
	4	Freberg, K., Saling, K., Vidoloff, K. G., & Eosco, G.	2013
	5	Freberg, K., Palenchar, M. J., & Veil, S. R.	2013
	6	Graham, M. W., Avery, E. J., & Park, S.	2015
	7	Liu, B. F., Fraustino, J. D., & Jin, Y.	2016
	8	Spence, P. R., Lachlan, K. A., Lin, X., & Del Greco, M.	2015
	9	Tandoc Jr, E. C., & Takahashi, B.	2017
	10	Veil, S. R., Buehner, T., & Palenchar, M. J.	2011
	11	Wukich, C.	2016
	12	Zhu, L., Anagondahalli, D., & Zhang, A.	2017

Publication Title	TC	C/Y	Links	Total Link Strength
Sports fans as crisis communicators on social media websites	101	9.18	34	13.00
"May No Act of Ours Bring Shame": Fan-Enacted Crisis Communication Surrounding the Penn State Sex Abuse Scandal	76	8.44	50	21.00
Using Twitter as a means of coping with emotions and uncontrollable crises	60	6.67	49	23.00
How Social Media Is Changing Crisis Communication Strategies: Evidence from the Updated Literature	97	16.17	50	33.00
The paracrisis: The challenges created by publicly managing crisis prevention	162	13.50	17	11.00
Amazon.com's Orwellian nightmare: exploring apology in an online environment	59	4.92	30	23.00
How publics react to crisis communication efforts : Comparing crisis response reactions across sub-arenas	154	15.40	41	25.00
How Disaster Information Form, Source, Type, and Prior Disaster Exposure Affect Public Outcomes: Jumping on the Social Media Bandwagon?	98	10.89	49	21.00
Keeping It Real: Exploring the Roles of Conversational Human Voice and Source Credibility in Crisis Communication via Blogs	75	7.50	42	27.00
Is the medium the message? Perceptions of and reactions to crisis communication via twitter, blogs and traditional media	520	40.00	35	23.00
How publics use social media to respond to blame games in crisis communication: The Love Parade tragedy in Duisburg 2010	73	6.08	19	7.00
'To trust or not to trust': The impact of social media influencers on the reputation of corporate brands in crisis	68	17.00	32	11.00
Crisis communication online: How medium, crisis type and emotions affected public reactions in the Fukushima Daiichi nuclear disaster	335	30.45	47	17.00
The Importance of Source and Credibility Perception in Times of Crisis: Crisis Communication in a Socially Mediated Era	72	8.00	50	22.00
Hoaxes and the Paradoxical Challenges of Restoring Legitimacy: Dominos' Response to Its YouTube Crisis	77	6.42	17	6.00
Exploring the relationship between corporate reputation and the public's crisis communication on social media	56	9.33	42	21.00
Publication Title	TC	C/Y	Links	Total Link Strength
Public information officers' social media monitoring during the Zika virus crisis, a global health threat surrounded by public uncertainty	65	9.29	34	8.00
"Facts, not fear": negotiating uncertainty on social media during the 2014 ebola crisis	52	6.50	37	13.00
Ebola on Instagram and Twitter: How health organizations address the health crisis in their social media engagement	201	28.71	19	9.00
"Reaching the global community during disasters: findings from a content analysis of the organizational use of Twitter after the 2010 Haiti earthquake	49	5.44	47	20.00
Distinguish how elite newspapers and a-list blogs cover crises: insights for managing crises online	47	3.36	26	11.00
Tweeting about emergency: A semantic network analysis of government organizations' social media messaging during Hurricane Harvey	84	14.00	52	29.00
Hope for Haiti: An analysis of Facebook and Twitter usage during the earthquake relief efforts	173	13.31	8	4.00
(Mis)communicating about COVID-19: Insights from Health and Crisis Communication	63	15.75	2	2.00
Organizations' conversations in social media: applying dialogue strategies in times of crises	53	5.30	42	21.00
Social media as a useful tool in food risk and benefit communication? A strategic orientation approach	81	8.10	31	8.00
Food crisis coverage by social and traditional media: a case study of the 2008 Irish dioxin crises	51	5.10	44	16.00
Public framing organizational crisis situations: Social media versus news media	93	8.45	24	6.00
When frames align: the interplay between pr, news media, and the public in times of crisis	54	5.40	41	19.00
Publication Title	TC	C/Y	Links	Total Link Strength
Social Media Use during Japan's 2011 Earthquake: How Twitter Transforms the Locus of Crisis Communication	85	7.73	15	5.00
Facebook and Twitter in Crisis Communication: A Comparative Study of Crisis Communication Professionals and Citizens	85	10.63	51	27.00
Intention to comply with crisis messages communicated via social media	113	9.42	33	7.00
Using value modeling to evaluate social media messages: The case of Hurricane Irene	61	5.55	51	21.00
Managing and sharing H1N1 crisis information using social media bookmarking services	92	8.36	30	12.00
The role of social media in local government crisis communications	176	19.56	53	17.00
Social Media Use During Disasters: How Information Form and Source Influence Intended Behavioral Responses	171	21.38	54	24.00
Variability in Twitter Content Across the Stages of a Natural Disaster: Implications for Crisis Communication	154	17.11	42	19.00
Log in if you survived: Collective coping on social media in the aftermath of Typhoon Haiyan in the Philippines	66	9.43	33	14.00
A Work-In-Process Literature Review: Incorporating Social Media in Risk and Crisis Communication	449	34.54	36	17.00
Government Social Media Messages across Disaster Phases	63	7.88	26	13.00
Social media and culture in crisis communication: McDonald's and KFC crises management in China	76	10.86	43	8.00

CLUSTER D (Yellow)	N. Articles	Authors	Year
Tourists' perceptions on social media and the tourism sector's resilience during critical times.	1	Hagen, L., Keller, T., Neely, S., DePaula, N., & Robert-Cooperman, C.	2018
	2	Ketter, E.	2016
	3	Liu, B., Kim, H., & Pennington-Gray, L.	2015
	4	Luo, Q., & Zhai, X.	2017
	5	Madianiu, M.	2015
	6	Möller, C., Wang, J., & Nguyen, H. T.	2018
	7	Park, D., Kim, W. G., & Choi, S.	2019
	8	Schroeder, A., Pennington-Gray, L., Donohoe, H., & Kioussis, S.	2013
	9	Schroeder, A., & Pennington-Gray, L.	2015
CLUSTER E (Purple)	N. Articles	Authors	Year
The role of information gathering and sense-making in disaster management.	1	Bruns, A., & Stieglitz, S.	2013
	2	Gaspar, R., Gorjão, S., Seibt, B., Lima, L., Barnett, J., Moss, A., & Wills, J.	2014
	3	Mirbabaie, M., Bunker, D., Stieglitz, S., Marx, J., & Ehnis, C.	2020
	4	Procter, R., Vis, F., & Voss, A.	2013
	5	Roy, K. C., Hasan, S., Sadri, A. M., & Cebrian, M.	2020
	6	Son, J., Lee, H. K., Jin, S., & Lee, J.	2019
	7	Stieglitz, S., Bunker, D., Mirbabaie, M., & Ehnis, C.	2018
	8	Vis, F.	2013
CLUSTER F (Light Blue)	N. Articles	Authors	Year
Influence of opinion leaders in dialogic crisis communication.	1	Eriksson, M.	2018
	2	Kim, S., Zhang, X. A., & Zhang, B. W.	2016
	3	Ott, L., & Theunissen, P.	2015
	4	Smith, B. G., Smith, S. B., & Knighton, D.	2018
	5	Zhao, X., Zhan, M., & Liu, B. F.	2018
CLUSTER G (Orange)	N. Articles	Authors	Year
The role of the source and form of information in crisis communication.	1	Austin, L., Fisher Liu, B., & Jin, Y.	2012
	2	Jin, Y., Liu, B. F., & Austin, L. L.	2014
	3	Kim, S., & Liu, B. F.	2012
	4	Liu, B. F., Austin, L., & Jin, Y.	2011
	5	Liu, B. F., Jin, Y., & Austin, L. L.	2013

Publication Title	TC	C/Y	Links	Total Link Strength
Crisis Communications in the Age of Social Media: A Network Analysis of Zika-Related Tweets	78	13.00	27	19.00
Destination image restoration on facebook: The case study of Nepal's Gurkha Earthquake	74	9.25	16	7.00
Responding to the bed bug crisis in social media	48	5.33	32	10.00
"I will never go to Hong Kong again!" How the secondary crisis communication of "Occupy Central" on Weibo shifted to a tourism boycott	112	16.00	43	23.00
Digital Inequality and second-order disasters: social media in the typhoon haiyan recovery	52	5.78	14	6.00
#strongerthanwinston: tourism and crisis communication through facebook following tropical cyclones in fiji	56	9.33	32	18.00
Application of social media analytics in tourism crisis communication	57	11.40	44	25.00
Using Social Media in Times of Crisis	78	7.09	13	24.00
The Role of Social Media in International Tourist's Decision Making	72	8.00	42	32.00
Publication Title	TC	C/Y	Links	Total Link Strength
Towards more systematic Twitter analysis: metrics for tweeting activities	228	20.73	21	11.00
Tweeting during food crises: A psychosocial analysis of threat coping expressions in Spain, during the 2011 European EHEC outbreak	60	6.00	17	11.00
Social media in times of crisis: Learning from Hurricane Harvey for the coronavirus disease 2019 pandemic response	70	17.50	20	17.00
Reading the riots on Twitter: methodological innovation for the analysis of big data	180	16.36	12	8.00
Understanding the efficiency of social media based crisis communication during hurricane Sandy	49	12.25	26	13.00
Content features of tweets for effective communication during disasters: a media synchronicity theory perspective	57	11.40	24	20.00
Sense-making in social media during extreme events	107	17.83	15	15.00
Twitter as a reporting tool for breaking news	263	23.91	9	6.00
Publication Title	TC	C/Y	Links	Total Link Strength
Lessons for Crisis Communication on Social Media: A Systematic Review of What Research Tells the Practice	90	15.00	46	36.00
Self-mocking crisis strategy on social media: focusing on alibaba chairman jack ma in China	50	6.25	30	13.00
Reputations at risk: Engagement during social media crises	105	11.67	15	3.00
Social media dialogues in a crisis: a mixed-methods approach to identifying publics on social media	54	9.00	31	11.00
Disentangling social media influence in crises: testing a four-factor model of social media influence with large data	54	9.00	43	14.00
Publication Title	TC	C/Y	Links	Total Link Strength
How Audiences Seek Out Crisis Information: Exploring the Social-Mediated Crisis Communication Model	374	31.17	50	41.00
Examining the Role of Social Media in Effective Crisis Management: The Effects of Crisis Origin, Information Form, and Source on Publics' Crisis Responses	309	30.90	47	34.00
Are All Crises Opportunities? A Comparison of How Corporate and Government Organizations Responded to the 2009 Flu Pandemic	91	7.58	36	24.00
How publics respond to crisis communication strategies: The interplay of information form and source	234	18.00	48	40.00
The Tendency To Tell: Understanding Publics' Communicative Responses To Crisis Information Form and Source	81	7.36	49	44.00

CLUSTER A The audience's active role in opinion sharing and participation in the rhetorical arena

The first theme that emerged from the bibliographic coupling concerns the increasingly active role of the public in the communication process. Through social media, the public can share opinions with other users and participate in the rhetorical arena along with the organization. This represents a radical change from the past. Indeed, from passive recipient, the audience has become an active contributor, capable of sharing opinions and creating content (Shi et al., 2014; Utz et al., 2013). Social media, therefore, facilitates a higher level of audience engagement in the process of communicating with organizations (Schultz et al., 2011) and fosters a multi-vocal approach to crisis communication (Frandsen and Johansen, 2010). Consequently, organizations must monitor online conversations, as they are a key information resource for assessing the effectiveness of communication strategies and, if necessary, implementing corrective actions if audiences are not adequately satisfied (Bakshy et al., 2011; Coombs and Holladay, 2012).

CLUSTER B Communication strategies for managing uncertainty during health crises

Fear, uncertainty and vulnerability, typical during health crises, pose great challenges in crisis management. In ambiguous, high-risk contexts, there is a certain level of uncertainty that organizations must learn to manage (Brashers, 2001). To meet this challenge, it is essential to invest in disseminating information, building trust, and developing two-way communication (Renn, 2009; Seeger et al., 2009). Indeed, trust must be nurtured by conveying accurate, truthful, and timely information that helps the public adopt appropriate behaviors. Symmetrical, two-way communication leads to beneficial relationships in the long run, strengthening trust between the organization and the public. An organization's past reputation also influences public trust during a crisis (Dalrymple et al., 2016).

CLUSTER C The role of social media in governments' crisis communication strategies

Social media offers governments innovative tools for interacting with the public. Indeed, the dialogic nature of social media makes it possible to overcome many of the barriers traditionally imposed by conventional media, opening up new channels of communication with citizens (Jarger and Bertot, 2010). The main benefits of using social media in the public administration include increased transparency, more active citizen engagement, and strong improvement in terms of trust (Graham et al., 2015; Kuzma, 2010). But despite the many benefits, local governments still have insufficient expertise to fully exploit the potential of these tools (Graham, 2013). Moreover, many public bodies have yet to cultivate specific skills and implement an organizational culture that is effectively suited to the pervasive use of these communication channels to improve interactions with the public (Reddick and Norris, 2013).

CLUSTER D Tourists' perceptions of social media and the resilience of the tourism industry at critical times

The advance of social media has confronted organizations with new critical issues, requiring careful management of the potential risks associated with miscommunication or communication that is not well-received by the public. Particularly when dealing with controversial or unpopular issues, inappropriate communication could trigger strongly negative reactions toward the organization, such as boycotts. For this reason, monitoring public opinion is crucial, especially in certain sectors such as tourism and hospitality, to determine which mitigation actions to implement to protect oneself. By properly assessing and managing public perceptions, organizations can improve their resilience (Bruneau et al., 2003; Luthe and Wyss, 2014). In fact, there is a direct link between resilient organizations and the use of social media: these tools are particularly effective in times of turbulence, as they allow the public to be informed in real time about developments in the

situation, enabling users to take mitigation actions based on their perceptions and emotions (Hays et al., 2013).

Cluster E The role of information gathering and sense-making in disaster management

Every crisis produces a strong need for information and for a collective understanding of the event. Information availability supports the preparedness, response, and recovery phases, each of which has different information needs (Sheppard et al., 2012). In the response phase, information must be concise and specific to facilitate protective actions. In contrast, in the preparedness and recovery phases, more detailed, in-depth information must be provided to increase situational awareness and minimize adverse effects (Sheppard et al., 2012). The availability and timeliness of information, beyond improving preparedness, response, and recovery operations, can also streamline coordination among the organizations involved (Comfort et al., 2005).

The response phase is closely related to crisis communication, while the preparedness and recovery phases must center on risk communication. As regards the latter, before the event occurs, the main objective is to gather as much information about the emergency and the broader context as possible. In crisis communication, on the other hand, information is shared to arrive at an understanding of the different hazards (Son et al., 2019). In addition to information gathering, the process of sense-making is also crucial, which aims to build a collective understanding of the phenomenon to help individuals give meaning to the chaotic situation generated by the crisis (Dervin, 2003).

Cluster F Influence of opinion leaders in dialogic crisis communication

In the digital context, where the public takes a much more active role, a prominent figure emerges: the opinion leader, who is capable of shaping public conversations and perceptions. With the evolution of the web, crisis communication has

transformed into a highly dialogic process that requires reciprocity, empathy and involvement (Taylor and Kent, 2014). Underlying dialogic communication is the proactive role of the audience in creating and sharing content. Digital tools have shifted the focus from one-to-one interactions between organizations and audiences to a series of multilateral relationships between different audience groups (Capriotti and Pardo Kuklinski, 2012). In this communicative context, it is vital to focus on the role of opinion leaders, those who pay special attention to an issue, discuss it openly with the public, and seek to influence public opinion (Katz and Lazarsfeld, 1955). One way to do this, and to disseminate information in general, is by participating in online discussions. Identifying the biggest influencers on social media allows organizations to earmark their financial resources for these individuals, potentially valuable allies who can help minimize potential negative fallout in terms of corporate reputation (Jin and Liu, 2010).

Cluster G The role of type and source of information in crisis communication

Also noteworthy is the role of the type of communication and information sources. The choice relative to these aspects, as well as the selection of the medium used to convey the message, greatly influence the effectiveness of the strategy and the audience's response. The type of communication is the mode in which the message is conveyed, while the source concerns the party sending the message (Procopio and Procopio, 2007). Schultz et al. (2011) argue that the medium of communication may even be more important than the message itself. Depending on the type of communication and the source of the message, people will be more or less likely to accept the crisis response implemented by the organization.

In the early stages of a crisis, traditional media and word of mouth are still the most effective modes of crisis communication for an organization because they enjoy greater credibility due to their association with journalistic practice and interpersonal familiarity. Social media tend to

play an emotional support role when the crisis has already hit and the public is already aware of the situation. Consequently, these platforms assume a more relevant function in the later stages of a crisis (Liu et al., 2011).

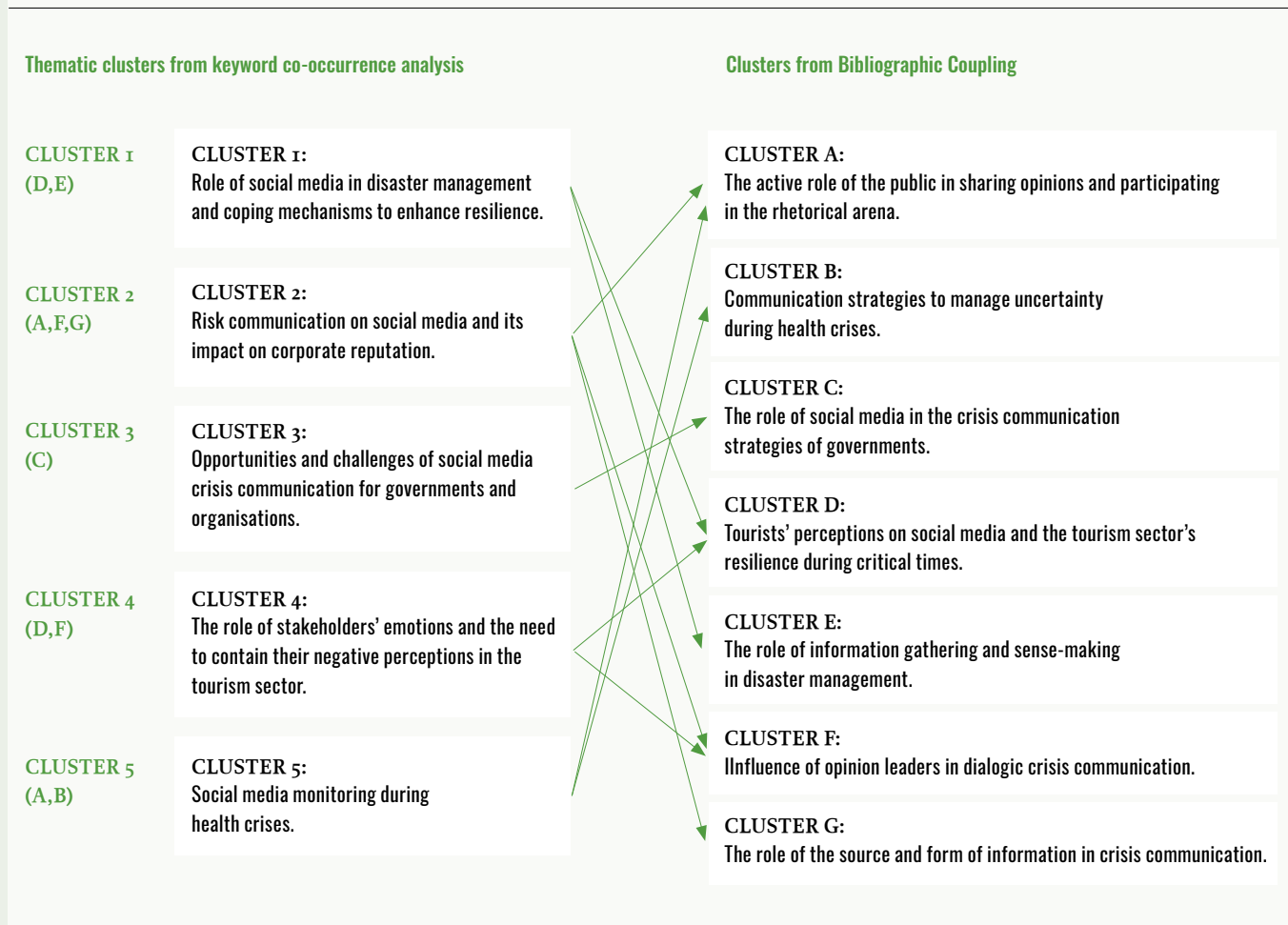
Bibliographic coupling, keyword co-occurrence analysis, and data triangulation

The implementation of keyword co-occurrence analysis and bibliographic coupling enables us to triangulate our data and come to a rigorous understanding of the main research strands emerging from the literature (Chandra et al., 2022; Donthu et al., 2021). Thematic clusters obtained from keyword co-occurrence analysis are labeled from 1 to 5, while those derived from bibliographic

coupling are labeled A to G. The thematic clusters that emerged from the two analyses show some convergence, and the effective triangulation of data reveals some particularly relevant moments for crisis communication in the social media landscape (Chandra et al., 2022).

Figure 5 shows that the clusters resulting from the keyword co-occurrence analysis are larger than those obtained using bibliographic coupling, which deals with more specific topics. Specifically, Cluster 1 refers to Clusters D and E; Cluster 2 to Clusters A, F, and G; Cluster 3 to Cluster C; Cluster 4 to Clusters D and F; and Cluster 5 to Clusters A and B. From this triangulation of data, we can summarize the factors that make certain crisis communication messages more effective than others.

FIGURE 5 DATA TRIANGULATION (PERSONAL ELABORATION)



DISCUSSION

Scholarly output on crisis communication and social media has increased over time, demonstrating growing research interest in the topic especially in recent years. Since 2020, the number of publications has exceeded fifty articles per year, a trend that reflects the proliferation of crises of various kinds in different sectors around the world, such as the Covid-19 pandemic. This has fueled strong interest in the role of social media in information dissemination and crisis management (Paul and Das, 2023). However, the upsurge in scientific output has not been accompanied by a corresponding improvement in research quality: Figure 2 shows an opposite trend in the number of citations, while Table 3 reveals the limited number of publications in journals included in ABS rankings. Considering the relevance and topicality of the issue, it is therefore necessary to promote higher quality research aimed at strengthening organizational resilience to external shocks, that is, the ability of companies to respond to adverse situations. Such resilience should not only be cultivated to handle more traditional crises, such as financial ones (Barbera et al., 2016), but also new emerging challenges.

Our bibliometric analysis also offers perspective on the evolving nuances of the topic under consideration. In the body of articles we analyzed, the growing prominence of the role of stakeholders and information management clearly emerges. From 2020 onward, with the Covid-19 pandemic emergency, there has been a substantial rise in the number of publications on the topic of managing risks from disasters and emergencies, with the goal of understanding how to ensure public safety and greater resilience among the organizations that are impacted (Duchek, 2019). This field of research shows strong collaboration among authors, as can be seen in Table 1, which reports significantly more co-authored publications than single-authored publications. Moreover, the most prolific authors work at universities in countries such as the United States and China, with a particularly evolved culture in preventive preparedness and disaster

management (Tierney, 2020).

Through scholarly mapping, and in particular the triangulation of clusters that emerged from keyword co-occurrence and bibliographic coupling, it was possible to draw the “big picture” of crisis communication in social media, the different nuances in the various topics, and the relationships between topics (Lim and Kumar, 2023; Mukherjee et al., 2022a). Some relevant aspects that emerge from the triangulation of the main strands of literature include:

- the role of stakeholders, who are more and more active, and need not only informational but also emotional support during a crisis (Perez-Lugo, 2004);
- the necessity to reduce negative emotions, concerns and fears of the public as much as possible by monitoring the online debate in order to contain the adverse impact of critical word of mouth or harmful behaviors such as boycotts (Herrera and Hoagland, 2006; Parson and Draheim, 2009);
- the role of the different actors involved, including national governments and local authorities, in defining procedures and facilitating a collective understanding of events (Graham et al., 2015).

These nuances offer valuable insights into how to communicate with the public in a transparent, appropriate, and timely manner (Dalrymple et al., 2016), preserving the company’s credibility and reputation and strengthening public trust (Avery, 2017). Indeed, the latter is a particularly valuable resource, especially in crisis situations when the public does not have all the information it needs to make informed decisions. Maintaining public trust offers several benefits, including positive word-of-mouth and favorable behaviors toward the organization involved (Castaldo & Grosso, 2015; Castaldo, 2024). Therefore, crisis communication strategies that address the needs and concerns of the public can strengthen the resilience of organizations, enabling them to deal with future crisis situations as well (Fearn-Banks, 2016; Jin et al., 2014). Conversely, ineffective strategies that fail to meet these needs can damage the organization’s reputation, erode

public trust, and undermine business performance indicators such as market share, profitability, and customer satisfaction (Ulmer et al., 2020). The main themes that emerged from the bibliometric analysis thus provide valuable insights into the necessity to monitor debate in the rhetorical arena and to engage influential stakeholders, aspects that taken together make crisis communication much more complex to manage than in the past (Rodin et al., 2018).

In addition to the more active role of the public in communication, the scope and effects of recent crises also challenge the theoretical model widely adopted in the literature, namely the Situational Crisis Communication Theory (Coombs, 2007; 2022). This calls for organizations to shift from more defensive communication strategies to more accommodating, constructive ones, although the latter are costlier. In addition, the number of external shocks that organizations face in the course of their existence is augmenting, both in frequency and magnitude. This requires them to intensify their crisis management and communication efforts to respond effectively to the uncertainty and vulnerability of the competitive environment (Pirotti and Venzin, 2014).

THEORETICAL IMPLICATIONS AND DIRECTIONS FOR FUTURE RESEARCH

Through bibliometric analysis, our study contributes to theoretical consolidation by providing an in-depth overview of the existing literature on the topic at hand. In particular, the most widely discussed theory in the sample is the Situational Crisis Communication Theory (Coombs, 2007; 2022), which has been challenged by the most recent crises and the increasingly active role of the public. As a result, new variables must be considered in defining current systemic crises. In any case, bibliometric analysis not only provides an accurate snapshot of the research on the topic to date, but also opens new horizons for research paths (Donthu et al., 2021; Verma and Gustafsson, 2020).

Future research on the topic could explore cooperation and collaboration among different

stakeholders, such as agencies and legislators, who protect public safety during crises by establishing protocols and regulations. Greater coordination efforts with these entities would enable organizations to respond to crises in a timelier manner and better manage public feelings of uncertainty and fear (Williams et al., 2021). In addition to the synergies and the network effect among these entities, in the digital ecosystem it is crucial to create synergies among the different communication channels (Baggio and Del Chiappa, 2013; Bregoli and Del Chiappa, 2013; Del Chiappa, 2004). However, in crisis contexts, traditional media such as newspapers and TV continue to be essential tools for disseminating information and therefore need to be properly integrated with social media, which should then act as complementary communication (Austin et al., 2012).

Most of the articles analyzed in the sample consider only one social media platform, which is why future studies on the topic should focus on comparing the effectiveness of crisis communication by analyzing multiple platforms. In addition to the channel used, the type of communication (text only, images, video) can also influence the effectiveness of the message, varying by audience age and country of residence. This aspect deserves further investigation in future research, as crisis communication has mainly focused on text content, while other formats, such as video (now one of the most popular content types) have been explored far less (Campbell and Rudan, 2020).

Finally, the availability of big data and advanced predictive analytics tools offers organizations the opportunity to monitor the external environment more closely, gather signals and, as a result, predict potential threats. The ability to identify, assess and manage risks and threats has always been critical to ensuring the continuity of organizations over time. This capability is particularly useful in responding to diverse competitive dynamics and increasingly complex relationships with multiple stakeholders (Tarantola, 2012). Access to a greater volume of information can also facilitate the personalization of messages aimed at different targets. In particular,

artificial intelligence can help create and refine these messages to generate a more timely and targeted response to users' needs. Questions persist, however, about the ethics of using these technologies, especially when they are applied to manage particularly sensitive situations, such as crises involving victims.

MANAGERIAL IMPLICATIONS

The study has several managerial implications. First, managers should strive to create crisis communication strategies that not only address the public's need for knowledge and information, but also foster social cohesion and emotional support. In other words, organizations should formulate messages that can minimize public fears by addressing key concerns (Wassler et al., 2022), allaying negative emotions and stimulating positive ones such as anticipation (i.e., the public's desire for a return to normalcy), and incentivizing of future intentions (Fedeli et al., 2022; Kim and Cameron, 2011). In this way, communication can guide the organization in supporting the public through the different stages of a crisis, containing the damage and promoting faster recovery (Perez-Lugo, 2004).

Second, in today's landscape, where the public is much more actively involved in communication, organizations must strive to maintain two-way, dialogic, engaging, and empathetic communication to meet the needs of the public and create beneficial, lasting relationships based on transparency and mutual trust (Nicholls, 2012; Tandoc and Takahashi, 2017). Audience satisfaction is an essential element that organizations must track closely, effectively monitoring online conversations and actively listening to their requests, concerns, and fears. By actively monitoring and listening, organizations can identify any critical issues and proactively address them before the public reacts negatively with behaviors such as boycotting, for example (Herrera and Hoagland, 2006; Parsons and Draheim, 2009). Once managers understand online dynamics, they can also identify particularly influential opinion

leaders and try to turn them into valuable allies, leveraging their media influence to the benefit of the organization (Schultz et al., 2011). Therefore, considering the increasingly active role of some users in various communication arenas (Siah Ann Mei et al., 2010; Whelan et al., 2013), organizations must learn how to properly deal with opinion leaders to transform them into strategic allies within the context of the corporate communication flow (Johansen et al., 2016).

Finally, the speed of information dissemination dictated by social media requires organizations to respond to crises in a timely manner; this can be done by putting communication plans in place ahead of time, allowing correct, effective messaging to be conveyed immediately (Schultz et al., 2011; Veil et al., 2011). A further advantage to advanced planning may be to enhance organizational resilience in the face of future crisis situations (Cutter et al., 2008). In this sense, the implementation of new technologies such as AI can enable organizations to deliver automated messages and responses, increasing the timeliness of responses and public satisfaction by delivering the information that people need. In addition, policymakers must implement initiatives and strategies that facilitate coordination and cooperation among agencies and organizations in times of crisis to reduce recovery time and foster valuable synergies among the various actors involved.

CONCLUDING REMARKS AND LIMITATIONS

Since 2010, research on crisis communication and social media has greatly expanded, partly in response to the growing difficulties organizations contend with in managing increasingly complex crises and the proliferation of multiple narratives on online platforms. Using a bibliometric approach, we provide insight into fragmented literature, highlighting major themes and publication dynamics. Our findings make a noteworthy contribution to the existing literature, offering useful takeaways for future action and areas of

research that explore the development of crisis communication in relation to new technologies and the expanding scope and frequency of the crises facing organizations today.

The study, however, is not without its limitations. Although bibliometric analysis is a useful tool for measuring and evaluating scientific activity, it has some drawbacks. For example, in our case, there is possible bias in the selection of the reference sample in relation to the Scopus database. In fact, the database may not cover all existing publications on the topic. Also, performance analysis based on bibliometric indicators such as the number of citations does not always correctly reflect the quality and scientific relevance of some papers. For an accurate, comprehensive assessment of the literature on a given topic, it is therefore essential to combine the bibliometric approach with other forms of evaluation. This is especially true for in-depth analyses of complex topics, such as crisis communication, which present multidisciplinary perspectives and involve multiple actors.

MANAGERIAL IMPACT FACTOR

- Crisis communication strategies should satisfy the public's need for information, but at the same time allow for social cohesion and emotional support during the different stages of a crisis.
- Communication must be two-way, dialogic, timely, engaging and empathetic to an increasingly active and participatory audience.
- Organizations must engage in continuous monitoring of online conversations and active listening to public concerns; the aim here is to identify potential critical issues and curb undesirable behaviors, critical word of mouth, and negative emotions.
- Influential opinion leaders among the public must be identified and turned into valuable allies in the crisis communication process.



REFERENCES

- Andersen, N. (2021). "Mapping the expatriate literature: A bibliometric review of the field from 1998 to 2017 and identification of current research fronts." *The International Journal of Human Resource Management*, 32(22), 4687–4724. [doi](#).
- Apuke, O. D., Omar, B. (2021). "Fake news and COVID-19: modelling the predictors of fake news sharing among social media users." *Telematics and Informatics*, 56, 101475. [doi](#).
- Aria, M., Cuccurullo, C. (2017). "Bibliometrix: An R-tool for comprehensive science mapping analysis." *Journal of Informetrics*, 11(4), 959–975. [doi](#).
- Arpan, L. M., Roskos-Ewoldsen, D. R. (2005). "Stealing thunder: Analysis of the effects of proactive disclosure of crisis information." *Public Relations Review*, 31(3), 425–433. [doi](#).
- Austin, L., Fisher Liu, B., Jin, Y. (2012). "How Audiences Seek Out Crisis Information: Exploring the Social-Mediated Crisis Communication Model." *Journal of Applied Communication Research*, 40(2), 188–207. [doi](#).
- Austin, L., Jin, Y. (2016). "Social media and crisis communication: Explicating the social-mediated crisis communication model." In *Strategic Communication*. Routledge, 163–186.
- Austin, L. L., Jin, Y. (2018). *Social media and crisis communication*. Routledge.
- Avery, E. J. (2017). "Public information officers' social media monitoring during the Zika virus crisis, a global health threat surrounded by public uncertainty." *Public Relations Review*, 43(3), 468–476. [doi](#).
- Baggio, R., Del Chiappa, G. (2013). "Real and virtual relationships in tourism digital ecosystems". *Information Technology & Tourism*, 14(1), 3–19. [doi](#).
- Baker, H. K., Kumar, S., Pattnaik, D. (2021b). "Twenty-five years of the Journal of Corporate Finance: A scientometric analysis." *Journal of Corporate Finance*, 66, 101572. [doi](#).
- Baker, H. K., Kumar, S., Pandey, N. (2021a). "Forty years of the Journal of Futures Markets: A bibliometric overview." *Journal of Futures Markets*, 41(7), 1027–1054. Portico. [doi](#).
- Bakshy, E., et al. (2011). Everyone's an influencer: Quantifying influence on twitter. Proceedings of the Fourth ACM International Conference on Web Search and Data Mining, 65–74. [doi](#).
- Barbera, C., Guarini, E., Steccolini, I. (2016). "Resilienti o «diversamente resilienti»? Le strategie finanziarie dei comuni in risposta agli shock esterni." *Economia & Management*, 5, 141–159.
- Barnett, J., et al. (2011). "Development of strategies for effective communication of food risks and benefits across Europe: Design and conceptual framework of the FoodRisC project." *BMC Public Health*, 11(1), 308. [doi](#).

- Brashers, D. E. (2001). "Communication and uncertainty management." *Journal of Communication*, 51, 477–497. [doi](#).
- Bregoli, I., Del Chiappa, G. (2013). "Coordinating Relationships Among Destination Stakeholders: Evidence from Edinburgh (UK)." *Tourism Analysis*, 18(2), 145–155. [doi](#).
- Broadus, R. N. (1987). "Early approaches to bibliometrics." *Journal of the American Society for Information Science*, 38(2), 127–129. [doi](#).
- Bruneau, M., et al. (2003). "A Framework to Quantitatively Assess and Enhance the Seismic Resilience of Communities." *Earthquake Spectra*, 19(4), 733–752. [doi](#).
- Callon, M., et al. (1983). "From translations to problematic networks: An introduction to co-word analysis." *Social science information*, 22(2), 191–235. [doi](#).
- Campbell, I. H., Rudan, I. (2020). "Effective approaches to public engagement with global health topics." *Journal of Global Health*, 10(1). [doi](#).
- Capriotti, P. Pardo Kuklinski, H. (2012). "Assessing dialogic communication through the Internet in Spanish museums." *Public Relations Review*, 38(4), 619–626. [doi](#).
- Castaldo, S. (2024). "Sostenibilità che crea fiducia." *Economia & Management*, 1, 2–5.
- Castaldo, S., Grosso, M. (2015). "Fiducia o incentivi? Come vincere la sfida del privacy concern nell'e-commerce." *Economia & Management*, 4, 96–111.
- Chandra, S., et al. (2022). "Personalization in personalized marketing: Trends and ways forward." *Psychology & Marketing*, 39(8), 1529–1562. [doi](#).
- Cheng, Y. (2018). "How Social Media Is Changing Crisis Communication Strategies: Evidence from the Updated Literature." *Journal of Contingencies and Crisis Management*, 26(1), 58–68. [doi](#).
- Cheong, J. C., Morrison, M. A. (2008). "Consumers' reliance on product information and recommendations found in UGC." *Journal of Interactive Advertising*, 8(2), 38–49. [doi](#).
- Comfort, L. K., Ko, K., Zagorecki, A. (2005). "Coordination in rapidly evolving disaster response systems: The role of information." In T. Terano, H. Kita, T. Kaneda, K. Arai and H. Deguchi, *Agent-Based Simulation: From Modeling Methodologies to Real-World Applications*. Springer-Verlag, 208–219.
- Coombs, W. T. (2007). "Protecting Organization Reputations During a Crisis: The Development and Application of Situational Crisis Communication Theory." *Corporate Reputation Review*, 10(3), 163–176. [doi](#).
- Coombs, W. T. (2022). "Situational Crisis Communication Theory (SCCT) Refining and Clarifying a Cognitive-Based Theory of Crisis Communication". *The handbook of crisis communication*, 193–204.
- Coombs, W. T., Holladay, J. S. (2012). "The paracrisis: The challenges created by publicly managing crisis prevention." *Public Relations Review*, 38(3), 408–415. [doi](#).
- Cutter, S. L., et al. (2008). "A place-based model for understanding community resilience to natural disasters." *Global Environmental Change*, 18(4), 598–606. [doi](#).
- Dalrymple, K. E., Young, R., Tully, M. (2016). "'Facts, Not Fear': Negotiating Uncertainty on Social Media During the 2014 Ebola Crisis." *Science Communication*, 38(4), 442–467. [doi](#).
- Del Chiappa, G. (2004). *Sviluppo aziendale e relazioni intorganizzative*. Utet Libreria, Torino.
- Dervin, B. (1992). "From the mind's eye of the user: The sense-making qualitative-quantitative methodology." In J.D. Glazier, R.R. Powell (eds), *Qualitative research in information management*, 61–84.
- Dervin, B. (2003). "Audience as listener and learner, teacher and confidante: The sense-making approach." In B. Dervin, L. Foreman-Wernet and E. Launterbach (eds), *Sense-Making Methodology Reader: Selected Writings of Brenda Dervin*. Cresskill, NJ: Hampton Press, 215–231.
- Donthu, N., et al. (2021). "How to conduct a bibliometric analysis: An overview and guidelines." *Journal of Business Research*, 133, 285–296. [doi](#).
- Duchek, S. (2019). "Organizational resilience: a capability-based conceptualization." *Business Research*, 13(1), 215–246. [doi](#).
- Fearn-Banks, K. (2016). *Crisis communications: A casebook approach*. Routledge.
- Fedeli, G., et al. (2022). "Travel desire over intention in pandemic times." *Annals of Tourism Research Empirical Insights*, 3(2), 100051. [doi](#).
- Frandsen, F., Johansen, W. (2010). "19. Corporate crisis communication across cultures." In A. Trosborg (eds), *Pragmatics across Languages and Cultures*, 543–570. [doi](#).
- Fraustino, J. D., Liu, B. F., Jin, Y. (2017). "Social Media Use During Disasters 1." *Social Media and Crisis Communication*, 283–295. [doi](#).
- Gonzalez-Herrero, A., Smith, S. (2008). "Crisis Communications Management on the Web: How Internet-Based Technologies are Changing the Way Public Relations Professionals Handle Business Crises." *Journal of Contingencies and Crisis Management*, 16(3), 143–153. [doi](#).
- Graham, M. (2013). "Government Public Relations and Social Media: An Analysis of the Perceptions and Trends of Social Media Use at the Local Government Level." *Public Relations Journal*, 7(4).
- Graham, M. W., Avery, E. J., Park, S. (2015). "The role of social media in local government crisis communications." *Public Relations Review*, 41(3), 386–394. [doi](#).
- Hafez, K., Grüne, A. (2022). *Foundations of Global Communication. A Conceptual Handbook*. London and New York: Routledge.
- Hadi, T. A., Fleshler, K. (2016). "Integrating Social Media Monitoring Into Public Health Emergency Response Operations." *Disaster Medicine and Public Health Preparedness*, 10(5), 775–780. [doi](#).
- Hays, S., Page, S. J., Buhalis, D. (2013). "Social media as a destination marketing tool: Its use by national tourism organisations." *Current Issues in Tourism*, 16(3), 211–239. [doi](#).
- Herrera, G. E., Hoagland, P. (2006). "Commercial whaling, tourism, and boycotts: An economic perspective." *Marine Policy*, 30(3), 261–269. [doi](#).
- Holmes, B. J. (2008). "Communicating about emerging infectious disease: The importance of research." *Health, Risk & Society*, 10(4), 349–360. [doi](#).
- Holmes, B. J., et al. (2009). "Communicating with the public during health crises: Experts' experiences and opinions." *Journal of Risk Research*, 12(6), 793–807. [doi](#).
- Iannacone, J. I. (2021). "Negotiating crises interpretations: The global rhetorical arena of the 2018 migrant caravan 'crisis'." *Public Relations Review*, 47(2), 102034. [doi](#).
- Jaeger, P. T., Bertot, J. C. (2010). "Designing, Implementing, and Evaluating User-centered and Citizen-centered E-government." *Citizens and E-Government*, 1–19. [doi](#).
- Jin, Y., Liu, B. F. (2010). "The blog-mediated crisis communication model: Recommendations for responding to influential external blogs." *Journal of Public Relations*

- Research, 22(4), 429–455. [doi](#).
- Jin, Y., Liu, B. F., Austin, L. L. (2014). "Examining the Role of Social Media in Effective Crisis Management: The Effects of Crisis Origin, Information Form, and Source on Publics' Crisis Responses." *Communication Research*, 41(1), 74–94. [doi](#).
- Johansen, B. F., Johansen, W., Weckesser, N. M. (2016). "Emotional stakeholders as "crisis communicators" in social media: The case of the Telenor customer complaints crisis." *Corporate Communications*, 21(3), 289–308. [doi](#).
- Khan, M. A., et al. (2021). "Value of special issues in the journal of business research: A bibliometric analysis." *Journal of Business Research*, 125, 295–313. [doi](#).
- Katz, E., Lazarsfeld, P. F. (1955). *Personal influence: The part played by people in the flow of mass communications*. Routledge.
- Kaye, B. K. (2005). "It's a blog, blog, blog, blog world: Users and uses of weblogs." *Atlantic Journal of Communication*, 13(2), 73–95.
- Kim, H. J., Cameron, G. T. (2011). "Emotions Matter in Crisis." *Communication Research*, 38(6), 826–855. [doi](#).
- Kozlowski, S. W., Chen, G., Salas, E. (2017). One hundred years of the Journal of Applied Psychology: Background, evolution, and scientific trends. *Journal of Applied Psychology*, 102(3), 237.
- Kuo, B. (2013). "Collectivism and coping: Current theories, evidence, and measurements of collective coping." *International Journal of Psychology*, 48, 374–388. [doi](#).
- Kuzma, J. (2010). "Asian government usage of web 2.0 social media." *European Journal ePractice*, 9, 1–13.
- Lim, J. S., Zhang, J. (2022). "Adoption of AI-driven personalization in digital news platforms: An integrative model of technology acceptance and perceived contingency." *Technology in Society*, 69, 101965. [doi](#).
- Lim, W. M., Kumar, S. (2023). "Guidelines for interpreting the results of bibliometric analysis: A sensemaking approach." *Global Business and Organizational Excellence*, 43(2), 17–26. [doi](#).
- Lim, W. M., Kumar, S., Ali, F. (2022). "Advancing knowledge through literature reviews: 'What', 'why', and 'how to contribute'." *The Service Industries Journal*, 42(7–8), 481–513. [doi](#).
- Liu, B. F., Austin, L., Jin, Y. (2011). "How publics respond to crisis communication strategies: The interplay of information form and source." *Public Relations Review*, 37(4), 345–353. [doi](#).
- Luthe, T., Wyss, R. (2014). "Assessing and planning resilience in tourism." *Tourism Management*, 44, 161–163. [doi](#).
- Maal, M., Wilson-North, M. (2019). "Social media in crisis communication – the dos and don'ts." *International Journal of Disaster Resilience in the Built Environment*, 10(5), 379–391. [doi](#).
- Mavrodieva, A. V., Shaw, R. (2021). "Social Media in Disaster Management." *Media and Disaster Risk Reduction*, 55–73. [doi](#).
- Moos, R. H., Schaefer, J. A. (1986). "Life transitions and crises." *Coping with Life Crises*, 3–28. [doi](#).
- Mukherjee, D., et al. (2022a). "Guidelines for advancing theory and practice through bibliometric research." *Journal of Business Research*, 148, 101–115. [doi](#).
- Mukherjee, D., et al. (2022b). "Mapping five decades of international business and management research on India: A bibliometric analysis and future directions." *Journal of Business Research*, 145, 864–891. [doi](#).
- Nerur, S. P., Rasheed, A. A., Natarajan, V. (2008). "The intellectual structure of the strategic management field: An author co-citation analysis." *Strategic Management Journal*, 29(3), 319–336. [doi](#).
- Nicholls, S. (2012). "The resilient community and communication practice." *The Australian Journal of Emergency Management*, 27, 46–51.
- Owen, T. (2015). "Disruptive power: The crisis of the state in the digital age." Oxford University Press, USA.
- Palen, L., et al. (2007). "Crisis Informatics: Studying Crisis in a Networked World." In *Proceedings of the third international conference on E-Social Science* (pp. 7–9).
- Parsons, E. C. M., Draheim, M. (2009). "A reason not to support whaling – a tourism impact case study from the Dominican Republic." *Current Issues in Tourism*, 12(4), 397–403. [doi](#).
- Paul, S., Das, S. (2022). "Investigating information dissemination and citizen engagement through government social media during the COVID-19 crisis." *Online Information Review*, 47(2), 316–332. [doi](#).
- Paul, J., et al. (2021). "Scientific procedures and rationales for systematic literature reviews (SPAR-4-SLR)." *International Journal of Consumer Studies*, 45(4). [doi](#).
- Perez-Lugo, M. (2004). "Media Uses in Disaster Situations: A New Focus on the Impact Phase." *Sociological Inquiry*, 74(2), 210–225. [doi](#).
- Perry, D. C., Taylor, M., Doerfel, M. L. (2003). "Internet-Based Communication in Crisis Management." *Management Communication Quarterly*, 17(2), 206–232. [doi](#).
- Pirotti, G. B., Venzin, M. (2014). "La resilienza organizzativa delle aziende. Come misurarla e rinforzarla per resistere e reagire in tempo di crisi." *Economia & Management*, 1, 59–74.
- Procopio, C. H., Procopio, S. T. (2007). "Do you know what it means to miss New Orleans? Internet communication, geographic community, and social capital in crisis." *Journal of Applied Communication Research*, 35(1), 67–87. [doi](#).
- Queensberry, K. A. (2020). *Social Media Strategy: Marketing, Advertising, and Public Relations in the Consumer Revolution (3rd ed.)*. Lanham, MD.
- Reddick, C. G., Norris, D. F. (2013). "Social media adoption at the American grass roots: Web 2.0 or 1.5?" *Government Information Quarterly*, 30(4), 498–507. [doi](#).
- Renn, O. (2009). "Risk communication: Insights and requirements for designing successful communication programs on health communication programs on health and environmental hazards". In R. L. Heath and D. H. O'Hair (eds.), *Handbook of risk and crisis communication*. Routledge, 80–98.
- Rodin, P., Gherstet, M., Odén, T. (2018). "Disentangling rhetorical subarenas of public health crisis communication: A study of the 2014–2015 Ebola outbreak in the news media and social media in Sweden." *Journal of Contingencies and Crisis Management*, 27(3), 237–246. [doi](#).
- Romenti, S., Murtarelli, G., Valentini, C. (2014). "Organisations' conversations in social media: Applying dialogue strategies in times of crises." *Corporate Communications*, 19(1), 10–33. [doi](#).
- Roy, K. C., et al. (2020). "Understanding the efficiency of social media based crisis communication during hurricane Sandy." *International Journal of Information Management*, 52, 102060. [doi](#).
- Schultz, F., Utz, S., Göritz, A. (2011). "Is the medium the message? Perceptions of and reactions to crisis communication via twitter, blogs and traditional media." *Public Relations Review*, 37(1), 20–27. [doi](#).
- Seeger, M. W. (2006). "Best Practices in Crisis Communication: An Expert

- Panel Process". *Journal of Applied Communication Research*, 34(3), 232–244. [doi](#).
- Seeger, M. W., Reynolds, B., Sellnow, T. L. (2009). "Crisis and emergency risk communication in health contexts: Applying the CDC model to pandemic influenza". In R. L. Heath and D. H. O'Hair (eds.), *Handbook of risk and crisis communication*, 302–322.
- Seltzer, T., Mitrook, M. A. (2007). "The dialogic potential of weblogs in relationship building." *Public Relations Review*, 33(2), 227–229. [doi](#).
- Sheppard, B., Janoske, M., Liu, B. (2012). "Understanding risk communication theory: A guide for emergency managers and communicators". National consortium for the study of terrorism and responses to terrorism (START). University of Maryland. [start.umd.edu](#).
- Shi, Z., Rui, H., Whinston, A. B. (2014). "Content sharing in a social broadcasting environment: Evidence from Twitter." *MIS Quarterly*, 38(1), 123–142. [doi](#).
- Siah Ann Mei, J., Bansal, N., Pang, A. (2010). "New media: A new medium in escalating crises?". *Corporate Communications: An International Journal*, 15(2), 143–155. [doi](#).
- Son, J., Lee, H. K., Jin, S., Lee, J. (2019). "Content features of tweets for effective communication during disasters: A media synchronicity theory perspective", *International Journal of Information Management*, 45, 56–68. [doi](#).
- Sutton, J., Palen, L., Shklovski, I. (2008). "Backchannels on the front lines: Emergent uses of social media in the 2007 southern California wildfires." In F. Fiedrich and B. Van de Walle (eds), *Proceedings of the 5th International ISCRAM Conference*.
- Tandoc, Jr., E. C., Takahashi, B. (2017). "Log in if you survived: Collective coping on social media in the aftermath of Typhoon Haiyan in the Philippines." *New Media and Society*, 19(11), 1778–1793. [doi](#).
- Tarantola, A.M. (2012). "Per un efficace presidio dei rischi: le lezioni della crisi." *Economia & Management*, 1, 73–80.
- Taylor, M., Kent, M. L. (2014). "Dialogic engagement: Clarifying foundational concepts." *Journal of Public Relations Research*, 26(5), 384–398. [doi](#).
- Tierney, K. (2020). *The social roots of risk: Producing disasters, promoting resilience*. Stanford University Press.
- Ulmer, R. R., Sellnow, T. L., Seeger, M. W. (2020). "Post-crisis communication and renewal: Understanding the potential for positive outcomes in crisis communication." In *Handbook of risk and crisis communication*, Routledge, 302–322. [doi](#).
- Utz, S., Schultz, F., Glocka, S. (2013). "Crisis communication online: How medium, crisis type and emotions affected public reactions in the Fukushima Daiichi nuclear disaster." *Public Relations Review*, 39(1), 40–46. [doi](#).
- Van der Meer, T. G. L. A., Verhoeven, P. (2013). "Public framing organizational crisis situations: Social media versus news media." *Public Relations Review*, 39(3), 229–231. [doi](#).
- Veil, S. R., Buehner, T., Palenchar, M. J. (2011). "A Work-In-Process Literature Review: Incorporating Social Media in Risk and Crisis Communication: Social Media and Crisis Communication." *Journal of Contingencies and Crisis Management*, 19(2), 110–122. [doi](#).
- Verma, S., Gustafsson, A. (2020). "Investigating the emerging COVID-19 research trends in the field of business and management: A bibliometric analysis approach." *Journal of Business Research*, 118, 253–261. [doi](#).
- Verma, S., Yadav, N. (2021). "Past, Present, and Future of Electronic Word of Mouth (EWOM)." *Journal of Interactive Marketing*, 53, 111–128. [doi](#).
- Wassler, P., et al. (2022). "Increasing vaccination intention in pandemic times: a social marketing perspective." *Italian Journal of Marketing*, 2022(1), 37–58. [doi](#).
- We are Social. (2023). Digital 2023, Global Overview Report—The essential Guide to the World's Connected Behaviours. [wearesocial.com](#).
- Whelan, G., Moon, J., Grant, B. (2013). "Corporations and Citizenship Arenas in the Age of Social Media." *Journal of Business Ethics*, 118(4), 777–790. [doi](#).
- Wigley, S., Fontenot, M. (2010). "Crisis managers losing control of the message: A pilot study of the Virginia Tech shooting." *Public Relations Review*, 36(2), 187–189. [doi](#).
- Williams, N. L., et al. (2021). "COVID-19 vaccine confidence and tourism at the early stage of a voluntary mass vaccination campaign: a PMT segmentation analysis." *Current Issues in Tourism*, 25(3), 475–489. [doi](#).
- Wright, D. K., Hinson, M. D. (2009). "An updated look at the impact of social media on public relations practice." *Public relations journal*, 3(2), 1–27.

