

Online Firestorm Phenomena: A Systematic Literature Review (SLR) Research

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ABSTRACT

Keywords:

Online Firestorm;
Social Media Outrage; Systematic
Literature Review; Crisis
Communication;
Moral Emotions

This study conducts a Systematic Literature Review (SLR) on the online firestorm phenomenon—a sudden surge of negative word-of-mouth (WoM) on social media directed at a public target. Using the PRISMA 2020 framework, 719 articles were identified from Scopus (2013–2025), of which 30 met the eligibility criteria for final analysis. Findings show that online firestorms are characterized by speed, emotional intensity, and viral amplification, typically triggered by moral or social norm violations. Research interest has grown rapidly since 2020, with most studies published in Q1 journals and dominated by quantitative methods. Six main themes emerged: crisis communication, moral emotions, social norm enforcement, political communication, computational detection, and digital leadership. This review concludes that online firestorms represent both communicative and socio-psychological phenomena, shaped by emotional contagion and algorithmic dynamics. This review provides an integrative understanding of digital outrage and offers practical insights for designing ethical and dialogic strategies to manage online crises in the age of participatory publics.

INTRODUCTION

The evolution of social media has transformed how individuals communicate, express emotions, and evaluate organizations. With more than 65.7 billion users worldwide (Datareportal, 2025), platforms such as X (formerly Twitter), Instagram, TikTok, and Facebook enable real-time interaction between users and brands, allowing opinions to spread rapidly across vast audiences. The participatory nature of these platforms has blurred the line between interpersonal communication and mass communication, creating environments in which collective emotions can escalate without formal mediation.

Within this dynamic ecosystem, the online firestorm has emerged as a critical communication phenomenon. Pfeffer et al. (2014) define an online firestorm as a sudden discharge of large quantities of negative word-of-mouth messages directed against a person, company, or group through social media networks. These events are characterized by their speed, volume, and emotional intensity, often leading to public outrage and reputational crises. Online firestorms are not isolated digital incidents; they represent a central challenge for brands, public figures, and political actors operating in networked communication spaces (Scholz & Smith, 2019).

Online firestorms can occur spontaneously or as reactions to perceived violations of moral, social, or political norms (Li et al., 2021). For instance, controversial corporate

advertisements, insensitive influencer statements, or political scandals may trigger waves of public condemnation. Such events reflect not only the rapid diffusion of information but also the collective sensemaking of online communities (Li et al., 2021). Scholars have observed that digital outrage differs from traditional word-of-mouth because of its scalability and permanence (Dominic, 2022). This social amplification of criticism is driven by emotional contagion, whereby negative sentiments are reinforced and amplified through likes, shares, and algorithmic promotion (Au, 2025). Consequently, the online firestorm is both a technological and socio-psychological phenomenon that illustrates how digital media infrastructures shape public discourse and crisis communication in the twenty-first century.

To understand the mechanisms underlying online firestorms, scholars have applied various theoretical perspectives, primarily drawn from communication, marketing, and psychology. The Stimulus–Organism–Response (S–O–R) model provides a psychological foundation for explaining individual behaviour during digital outrage events (Wanigapura et al., 2025). According to this model, external stimuli such as offensive content or unethical brand behaviour provoke internal affective and cognitive reactions (organism), which in turn lead to behavioural responses such as boycotting, commenting, or unfollowing (Coombs & Holladay, 2021; Russell & Mehrabian, 1974). This process captures the emotional reactivity that characterizes online firestorms and highlights how user responses are shaped by digital stimuli in their social media environments.

Complementary to this psychological lens, the Social Amplification of Risk Framework (SARF) explains how communication processes can amplify perceived risks or moral violations (Coombs, 2022; Coombs & Holladay, 2021). In social media contexts, each user acts as an amplifier of outrage, transmitting emotional signals that increase the perceived severity of an incident. The combination of these frameworks shows that online firestorms result from the interaction between media affordances, social cognition, and emotional contagion. Moreover, research on electronic word-of-mouth (e-WoM) further elucidates how user-generated communication accelerates the diffusion of opinions and strengthens the collective formation of public judgments (Coombs, 2022). Together, these theories establish the conceptual foundation for analysing how online firestorms originate, spread, and influence social perception.

From a communication management perspective, Situational Crisis Communication Theory (SCCT) contributes to understanding how organizations should respond to online firestorms. SCCT suggests that the perceived responsibility of the actor determines the appropriate response strategy, ranging from denial to apology and corrective action (Pfeffer et al., 2014). When combined with online firestorm theory, SCCT underscores the importance of dialogic engagement and transparency in mitigating the reputational damage caused by digital outrage. Thus, the phenomenon of online firestorms lies at the intersection of emotional psychology, risk communication, and strategic crisis response, reflecting the multidimensional nature of digital communication crises.

The dynamics of online firestorms vary across contexts, platforms, and cultures. According to Pfeffer et al. (2014) and Singh & Singh (2025), online firestorms can be categorized based on their triggers: (1) corporate firestorms, usually arising from consumer dissatisfaction or perceived brand misconduct; (2) influencer firestorms, triggered by moral or social norm violations by public figures; and (3) political firestorms, resulting from partisan

conflicts or ideological disputes. Each type operates under distinct communication logics but shares the same structural properties: rapid escalation, collective participation, and moral judgment.

The architecture of each social media platform influences how these events unfold. On X, hashtags and reposts create an echo chamber that accelerates visibility, while Instagram and TikTok rely more on visual storytelling and influencer credibility to sustain attention (Herhausen et al., 2019). Algorithmic design amplifies emotionally charged content, prioritizing outrage over neutrality. In non-Western contexts, particularly in Southeast Asia, the buzzer phenomenon—networks of paid or voluntary online actors—adds another layer of complexity to online firestorms (Valmohammadi et al., 2025; Yang & Mundel, 2022). These actors may intensify or manipulate online sentiment for political or commercial goals, blurring the line between organic and orchestrated outrage. Such variations underscore the need for comparative and cross-cultural research to understand the influence of platform affordances, political culture, and social norms on the dynamics of online firestorms.

Online firestorms have far-reaching consequences for individuals, brands, and organizations. The immediate effect is often reputational damage, as negative narratives dominate online conversations and influence stakeholder perception. Persistent exposure to such negative e-WoM can decrease brand trust, reduce brand love, and increase the likelihood of brand switching (Valmohammadi et al., 2025; Yang & Mundel, 2022). From a communication standpoint, online firestorms represent a loss of narrative control; brands can no longer manage meaning unilaterally but must negotiate reputation in real time with online publics (Pawar, 2025). This shift demands a reconfiguration of traditional public relations strategies, emphasizing authenticity, empathy, and engagement.

Scholars argue that effective responses to online firestorms depend on dialogic communication and crisis transparency. Immediate acknowledgment, empathetic tone, and corrective measures can mitigate the intensity of outrage, while defensive or dismissive responses tend to exacerbate it (du Plessis, 2018; Jamil, 2021). Coombs (2022) suggests that in high-responsibility crises, apologetic strategies are more effective than denial or silence. Additionally, emotional regulation plays a vital role in both preventing and managing digital outrage, as users respond more positively to messages that express accountability and sincerity (Herhausen et al., 2019). The implications extend beyond corporate contexts to political figures and influencers, whose personal brands rely heavily on perceived authenticity. Understanding these communicative dynamics is therefore essential for both scholars and practitioners seeking to manage public sentiment in digital environments.

Since Pfeffer et al. (2014) introduced the term online firestorm, the volume of related research has grown significantly. However, existing studies remain fragmented across multiple academic disciplines such as marketing, communication, psychology, and information systems. Many investigations focus on brand crises or consumer outrage in Western markets (Herhausen et al., 2019), while studies addressing political or influencer-based firestorms are relatively limited. Methodologically, quantitative content analyses dominate the field, with fewer experimental or longitudinal designs capable of testing causal relationships. There is also a shortage of cross-platform comparisons and non-Western perspectives, despite the growing importance of social media ecosystems in Asia, Africa, and Latin America.

Moreover, few studies attempt to integrate theories from different disciplines, leading to conceptual fragmentation. Similarly, emotional contagion is often measured descriptively without considering the role of algorithmic amplification or social identity. These gaps indicate a need for systematic synthesis to clarify how online firestorms have been conceptualized, what dimensions dominate scholarly discussions, and where future research should focus. Therefore, a Systematic Literature Review (SLR) is a timely and necessary method to map the theoretical evolution, methodological trends, and thematic dimensions of online firestorm research comprehensively.

Given the fragmented and multidisciplinary nature of existing research, this study aims to provide a comprehensive synthesis of the literature on online firestorms. Using the SLR method, this research identifies and analyzes journal articles discussing online firestorms on social media to answer seven key questions:

RQ1: How has the online firestorm phenomenon been conceptualized and defined in the existing literature?

RQ2: What are the yearly publication trends of studies discussing online firestorms indexed in Scopus?

RQ3: How are the identified articles distributed according to journal rankings and impact factors?

RQ4: What is the geographical distribution of research publications on online firestorms across different countries or regions?

RQ5: What research methodologies have been employed in studies examining online firestorms?

RQ6: What are the dominant research themes and theoretical perspectives explored in the literature on online firestorms?

RQ7: What research gaps and future research directions can be identified from existing studies on online firestorms?

Second, it provides an empirical overview of research trends, identifying which methods, regions, and disciplines have engaged most actively with this topic. Third, it proposes future directions that can bridge theory and practice, emphasizing the relevance of online firestorms for digital crisis communication, reputation management, and media ethics. Ultimately, this SLR aspires to enhance scholarly understanding of how digital outrage operates and to support practitioners in designing more resilient communication strategies in an age of algorithmic amplification and participatory publics.

METHOD

In this research, the Systematic Literature Review (SLR) framework is applied as the central theoretical foundation to synthesize existing knowledge on online firestorm phenomena across social media contexts. The SLR process provides the structural logic for collecting, screening, and analysing journal articles relevant to the research questions. To operationalize this theoretical structure, the study employs the PRISMA 2020 model (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) as a procedural guide to ensure methodological transparency and replicability. The PRISMA diagram visually represents the flow of information through the different phases of the review—identification, screening,

eligibility, and inclusion—and documents how studies are selected and excluded based on pre-established criteria (Rethlefsen & Page, 2022).

To ensure transparency and consistency throughout the review process, all retrieved articles were imported into Rayyan AI, an artificial intelligence–assisted platform for systematic literature reviews. Rayyan AI enabled the researchers to conduct independent screening, automatically detect duplicates, and apply inclusion and exclusion criteria collaboratively. The use of this tool reduced human error, maintained reviewer blinding, and strengthened the objectivity of the PRISMA-based selection process.

Specifically, the review began with a comprehensive search of the Scopus database for the publication period 2013–2025, using the keywords “online firestorm” and its synonyms. After removing duplicates and applying inclusion and exclusion criteria, the screening process followed the PRISMA flow, resulting in a final dataset of peer-reviewed journal articles that directly address online firestorms within the domains of communication, marketing, and digital sociology. To minimize potential bias, all selected studies were independently reviewed by multiple researchers. This collaborative review process ensures that inclusion and interpretation decisions are based on collective judgment rather than individual perspective, thereby enhancing the objectivity and reliability of the systematic review.

RESULT AND DISCUSSION

The initial search process was conducted in the Scopus database using a comprehensive combination of keywords to capture the breadth of literature related to online firestorm phenomena on social media platforms. The search strategy was developed based on synonymous terms and conceptual variations found in prior studies, including “digital firestorm,” “online backlash,” and “social media outrage.” Boolean operators (AND, OR) and truncations (*) were applied to ensure inclusiveness and precision of retrieved records. The search was limited to English-language, peer-reviewed journal articles published between 2013 and 2026, focusing on studies that discussed user outrage, brand crises, or viral controversies within online and social media contexts. The detailed search string and applied filters are summarized in Table 1 below.

Table 1 Search Strategy used in Elsevier Scopus

Database	Search Strategy	Notes
Scopus	("online firestorm*" OR "social media outrage" OR "digital outrage" OR "social media backlash" OR "online backlash" OR "digital backlash" OR "social media scandal" OR "viral controversy" OR "public outrage" OR "online outrage") AND ("social media" OR "social networking site" OR "digital platform*" OR "online community") AND ("Instagram" OR "Twitter" OR "Facebook" OR "TikTok" OR "YouTube")	Field: Title-Abstract-Keywords. Limited applied: English only, peer-reviewed journal articles, dates 2013-2026 Initial search 719

Source: Processed from Elsevier Scopus, October 2025

Table 2 Inclusion and Exclusion criteria table

Criteria Type	Inclusion	Exclusion
Language	English	Non-English
Document Type	peer-reviewed journal articles	book, conference paper, editorials, theses, grey literature
Publication year	2013-2026	Before 2013
Topic Relevance	Articles explicitly discussing <i>online firestorms</i> or <i>social media outrage/crisis</i>	Studies unrelated to online firestorm, or not in social media context
Access	Full text available	Abstract only

Source: Processed from Elsevier Scopus, October 2025

Following the implementation of the search strategy, a total of 719 articles were initially identified through the Scopus database. After duplicate removal (n = 0), 719 unique records remained for screening. Based on title and abstract review, 217 articles met the relevance criteria, while 187 were excluded for not addressing the online firestorm phenomenon in a social media context. Subsequently, 217 full-text articles were assessed for eligibility to ensure theoretical and methodological relevance. Of these, 187 studies were excluded for not meeting the inclusion requirements, such as lack of conceptual focus on online firestorms or absence of empirical analysis. After applying quality assessment criteria, 30 articles were selected as the final dataset for synthesis, with 689 records excluded in the final quality screening stage (yield rate 4,17%). This process reflects the rigorous selection and evaluation applied throughout the systematic review, as summarized in the PRISMA flow diagram.

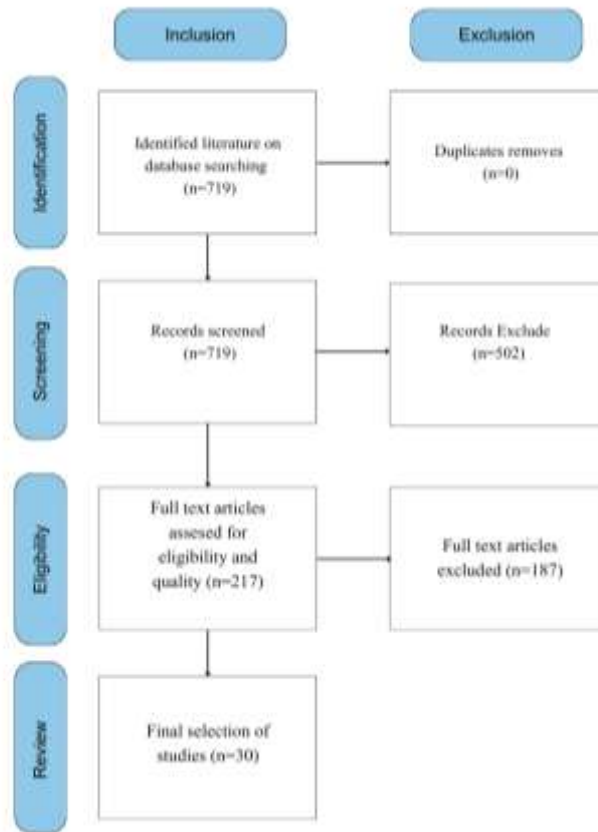


Figure 1. Overview of the Literature Review Process Following the PRISMA Guidelines
Source: Processed from Rayyan, October 2025

The initial search in the Scopus database yielded 719 articles, which represented the total body of potentially relevant literature on online firestorm phenomena across social media platforms. After duplicate removal (n = 0), all records proceeded to the screening stage. During the screening of titles and abstracts, 502 articles were excluded for not aligning with the defined inclusion criteria, such as studies unrelated to online outrage or those lacking a social media context. This left 217 full-text articles that were assessed for eligibility and quality. At the final stage, 30 studies met all inclusion and quality criteria and were selected for the final review and synthesis. This process ensured that the included literature was both methodologically robust and directly relevant to the research questions of this study.

Table 3 Summary of Reviewed Journal Articles

No	Title	Journal Rank	Country	Methods used	Author
1	“I don’t like guns but having one in Winnipeg right now would feel Crime, Media, Culture safer”: Crime, liquor theft, and online fantasies of punishment and control.	Q1	Canada	Qualitative	(Maier & Kohm, 2025)
2	Natural Born Supporters? The Role of Personality Traits for Stakeholders' Moral Emotions and Behavioural	Q2	Germany	Quantitative	(Rogotzki & Rudeloff, 2025)

	Intentions Towards Activist Corporate Brands in Online Firestorms.				
3	Evaluating Military Use of social media for Political Branding during Online Firestorms: An Analysis of the Afghan Troops Withdrawal.	Q1	Australia	Quantitative	(Uwalaka, 2025)
4	Online Verbal Aggression on Social Media During Times of Political Turmoil: Discursive Patterns from Poland's 2020 Protests and Election.	Q1	Poland	Mix Methods	(Domalewska, 2025)
5	The Resonance of Anti-Black Violence in the Great Outdoors.	Q1	Canada	Qualitative	(Redden, 2025)
6	Moral Outrage Predicts the Virality of Petitions for Change on Social Media, But Not the Number of Signatures They Receive.	Q1	UK	Quantitative	(Leach et al., n.d.)
7	Beyond Moral Outrage: The Role of the Ingroup in Online Condemnations.	Q1	Australia	Quantitative	(Rotman et al., 2025)
8	Hypocrites! Social Media Reactions and Stakeholder Backlash to Conflicting CSR Information.	Q1	USA	Quantitative	(Lewin & Warren, 2025)
9	Brewing crises: Bud Light's stakeholders' loyalty and crisis communication fizzle.	Q1	Australia	Qualitative	(Iachizzi, 2025)
10	Sanctioning political speech on social media is driven by partisan norms and identity signalling.	Q1	USA	Quantitative	(Ahn et al., 2024)
11	Belief in a Just World Decreases Blame for Celebrity Infidelity.	Q1	Japan	Quantitative	(Huang et al., 2024)
12	Navigating Firestorms: The Imperative of Conflict-Intelligent Leadership in a Turbulent World.	Q2	USA	Qualitative	(Coleman, 2024)
13	Judging the Wrongness of Firms in Social Media Firestorms: The Heuristic and Systematic Information Processing Perspective.	Q1	UK	Quantitative	(Chan et al., 2024)
14	From Moral Indignation to Affective Citizenship: Public Shaming of Celebrity Emigration from Russia During the War Against Ukraine.	Q1	Israel	Qualitative	(Lerner & Stephenjohn, 2024)
15	The speed of news in Twitter (X) versus radio.	Q1	USA	Quantitative	(Brannon & Roy, 2024)
16	Does Social Media Use Polarize or Depolarize Political Opinion in China? Explaining Opinion Polarization Within an Extended Communication Mediation Model.	Q1	Hong Kong	Quantitative	(Guo & Hu, 2023)
17	The bittersweet smell of success: Malicious online responses to others achievements.	Q1	Israel	Quantitative	(Hornik et al., 2023)

18	Nigerian Military Strategic Use of social media During Online Firestorms: An Appraisal of the NDA Terrorist Attack.	Q1	Australia	Qualitative	(Uwalaka, 2023)
19	Doing good or feeling good? Justice concerns predict online shaming via deservingness and schadenfreude.	Q1	USA	Quantitative	(Barron et al., 2023)
20	What Leads to Voting Despite Intention to Abstain?: Emotions, Turnout, and Negative Campaigns in Turkish Elections.	Q2	Turkey	Quantitative	(Ugur-Cinar & Ince, 2023)
21	Rhetorics of Hope and Outrage: Emotion and Cynicism in the Coverage of the Schengen Accession.	Q1	Romania	Quantitative	(Meza, 2023)
22	Hostile-emotional excess of zeal in public social media: A case study of an online firestorm against an organization.	Q1	Switzerland	Quantitative	(Rost & Stahel, 2022)
23	Does my Social Media Burn? – Identify Features for the Early Detection of Company-related Online Firestorms on Twitter.	Q1	Germany	Quantitative	(Koch et al., 2021)
24	How social learning amplifies moral outrage expression in online social networks.	Q1	USA	Quantitative	(Brady et al., 2021)
25	What drives people to participate in online firestorms?.	Q1	Austria	Mix Method	(Gruber et al., 2020)
26	How harmful are online firestorms for brands? An approach to the phenomenon from the participant level.	Q2	Spain	Quantitative	(Delgado-Ballester et al., 2021)
27	Studying social media sentiment using human validated analysis.	Q2	Cape Town	Mix Methods	(Lappeman et al., 2020)
28	Social media outrage in response to a school-based substance use survey: Qualitative analysis.	Q2	USA	Qualitative	(Gassman et al., 2019)
29	Digital Social Norm Enforcement: Online Firestorms in Social Media.	Q1	Switzerland	Quantitative	(Rost et al., 2016)
30	Understanding online firestorms: Negative word-of-mouth dynamics in social media networks.	Q1	USA	Qualitative	(Pfeffer et al., 2014)

Source: Processed from final selection of study, October 2025

RQ1: How has the online firestorm phenomenon been conceptualized and defined in the existing literature?

The online firestorm phenomenon is widely conceptualized in scholarly literature as a rapid, large-scale surge of negative communication directed at a specific target within digital networks. Researchers frequently define it as a sudden discharge of massive volumes of negative word-of-mouth (WoM), often emerging in reaction to perceived violations of social norms or controversial behaviours. The event typically unfolds within social media platforms, where users collectively express disapproval toward an individual, company, or institution. As a result, online firestorms are situated within broader discourses of digital crisis, moral outrage,

and emotional contagion, reflecting the increasingly volatile and participatory nature of online publics.

Fundamentally, online firestorms are characterized by their remarkable speed, volume, and emotional intensity. They represent sudden bursts of hostile communication that can reach viral proportions within hours. The discourse is predominantly affective rather than factual, characterized by insults, profanity, and expressions of indignation. These emotional elements distinguish firestorms from mere online rumours. Common targets include corporations, politicians, celebrities, and public institutions, while triggers often arise from controversial events or perceived norm transgressions. Interestingly, firestorms may even emerge from positive events when audiences experience emotions such as *glückschmerz*—displeasure at others' success. Additionally, the brevity and immediacy inherent in social media platforms, such as the limited message length on X (formerly Twitter), amplify their virality and emotional contagion.

The theoretical conceptualizations of online firestorms draw heavily on frameworks of social norm enforcement and collective behaviour. Within this view, firestorms are perceived as digital mechanisms of social control, where public outrage serves to uphold moral or ethical standards. The emotional and moral dimensions of participation—moral outrage, moral contagion, and even moral panic—underscore how users collectively regulate behaviours they perceive as inappropriate. Scholars also emphasize the multiplicity of motives underlying hostile online expressions, ranging from moral enforcement to excessive zeal. These insights highlight how online firestorms are not merely irrational outbursts but socially embedded forms of digital norm maintenance and community boundary reinforcement.

From the perspective of collective action and information processing, online firestorms represent a unique form of networked protest and participatory communication. The Situational Theory of Problem Solving (STOPS) frames these events as collective responses to perceived social problems, wherein participants act to effect change or hold powerful actors accountable (Tam et al., 2022). Participation is often fuelled by the perception of collective identity and a shared sense of moral mission. Additionally, through the lens of the Heuristic-Systematic Model (HSM), individuals tend to rely on heuristic judgments such as social cues or viral consensus rather than systematic reasoning when assessing organizational wrongdoing (Khalifa & Khalifa, 2022). This reliance on rapid, emotion-driven information processing further explains the intensity and volatility of firestorm dynamics.

The crisis and reputation management perspective positions online firestorms as critical organizational challenges with tangible consequences. Companies facing such crises may experience severe reputational damage, financial losses, or internal upheaval. The principal-agent theory provides additional insight, suggesting that firestorms create information asymmetry between corporations (principals) and social media users (agents), undermining trust and control. Scholars also recognize the diverse terminology associated with the phenomenon—flaming, trolling, cyber aggression, or brand attacks—indicating its multifaceted and interdisciplinary nature. Collectively, these conceptual and theoretical perspectives demonstrate that online firestorms embody not only communicative crises but also reflections of the evolving moral and emotional logic of digital publics.

RQ2: What are the yearly publication trends of studies discussing online firestorms indexed in Scopus?

The analysis from 30 selected journal articles retrieved from the Scopus database reveals a clear upward trajectory in research focusing on the online firestorm phenomenon between 2013 and 2025, such as on figure 5 below:

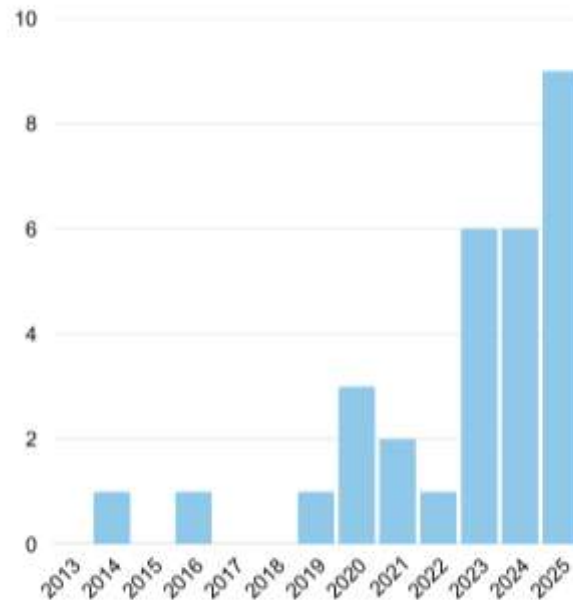


Figure 2 Yearly Distribution of Online Firestorm Publications Indexed in Scopus (2013–2025)

Source: Processed from final selection of study, October 2025).

During the early years (2013–2019), publications appeared sporadically, with only one article per year (approximately 7.1% each), reflecting the topic’s emerging status in communication and digital behaviour studies. A moderate increase occurred in 2020, when three articles (10.7%) were published, coinciding with rising global attention toward social media crises during the pandemic period. In 2021 and 2022, the publication rate slightly declined (two and one articles respectively, or 7.1% and 3.6%). However, research interest significantly accelerated in 2023 and 2024, each contributing six articles (21.4%), and reached its highest point in 2025, with nine publications (32.1%). This steady growth trend indicates that online firestorms have evolved from a niche subject into a major research area within digital communication, online consumer behaviour, and crisis management studies.

The increasing number of studies on online firestorms from 2013 to 2025 demonstrates growing academic interest and recognition of the phenomenon as an important topic in digital communication research. This upward trend suggests that online firestorms have evolved from isolated incidents into a major area of study, especially in relation to social media behaviour, digital ethics, and crisis communication. The sharp rise in publications after 2020 indicates that researchers began paying more attention to the role of social media in spreading public outrage, particularly during global events such as the pandemic. This finding highlights the need for

future research to explore the long-term impact of online firestorms on public trust, brand reputation, and digital governance across different cultural and platform contexts.

RQ3: How are the identified articles distributed according to journal rankings and impact factors?

The analysis of 30 journal articles on online firestorm indexed in Scopus indicates that the majority of studies were published in high-impact journals, predominantly within Q1 and Q2 categories based on the Scimago Journal Rank (SJR) classification.

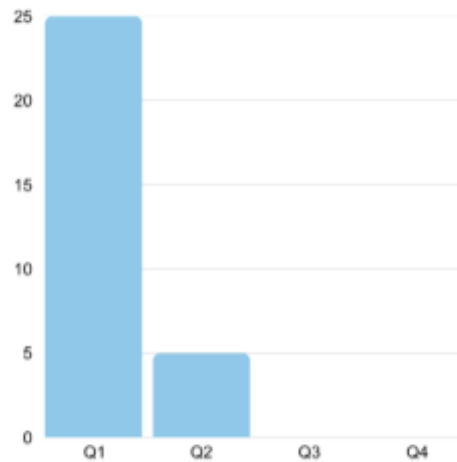


Figure 3 Distribution of Online Firestorm Articles Based on Scimago Journal Rankings (Q1–Q4)

Source: Processed from Scimago Journal Rank (SJR), October 2025.

Specifically, 25 articles (83.3%) appeared in Q1 journals, while 5 articles (16.7%) were published in Q2 journals. No publications were found in Q3 or Q4 journals. This distribution demonstrates that the topic of online firestorm has gained considerable academic recognition and is being discussed within top-tier journals in the fields of communication, marketing, and information systems. The dominance of Q1 publications reflects the high scholarly value, methodological rigor, and global relevance of this topic, suggesting that online firestorm research is positioned as a credible and significant domain in contemporary social media and digital communication studies.

The concentration of studies within top-tier outlets reflects the growing theoretical depth, methodological rigor, and global significance of online firestorm as a digital communication issue. This pattern also suggests that scholars are increasingly recognizing the phenomenon as a key area for advancing knowledge in social media dynamics, online behaviour, and crisis communication. The absence of publications in lower-ranked journals (Q3 and Q4) further implies that research in this area has matured, with scholars prioritizing publication in reputable journals that emphasize conceptual innovation and interdisciplinary approaches.

RQ4: What is the geographical distribution of research publications on online firestorms across different countries or regions?

The analysis of 30 journal articles reveals that research on online firestorm phenomena is distributed across multiple countries, demonstrating its global academic relevance.

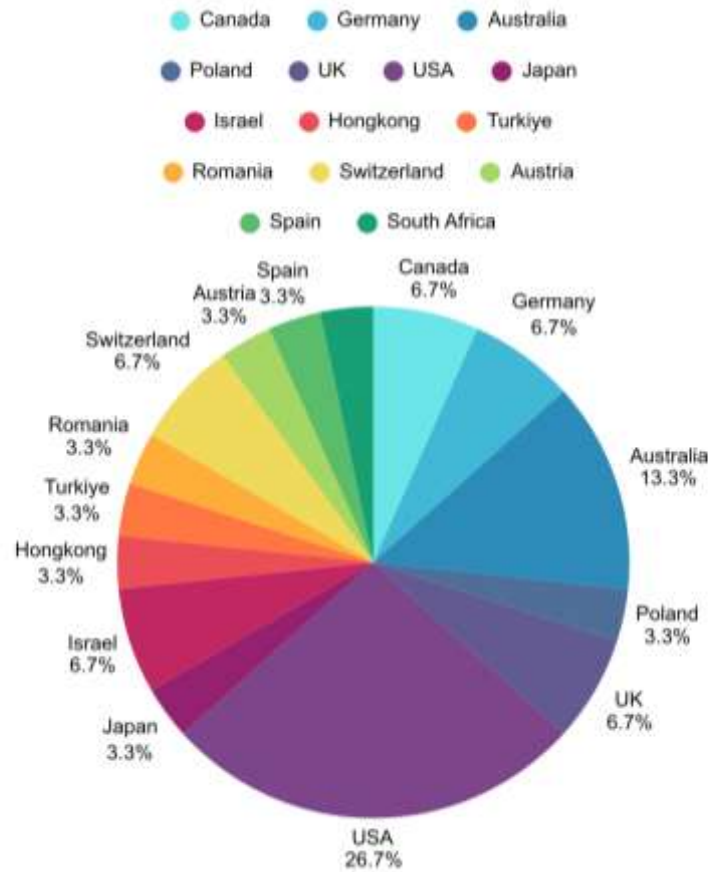


Figure 4 Geographical Distribution of Online Firestorm Publications Indexed in Scopus (2013–2025)

Source: Processed from Final selection of study, October 2025

The United States leads with 26.7% of total publications, reflecting its strong research tradition in digital communication and crisis management studies. Australia follows with 13.3%, while Germany, Canada, Israel, Switzerland, and the United Kingdom each contribute 6.7% of the total output. Other countries, including Poland, Japan, Hong Kong, Türkiye, Romania, Austria, Spain, and South Africa, each account for 3.3% of the total publications. This wide geographical spread highlights the international significance of the online firestorm topic and suggests that the phenomenon is being explored across both Western and Asian contexts. The dominance of contributions from developed countries (such as the USA, Australia, and European nations) also indicates a higher concentration of academic infrastructure, research funding, and access to Scopus-indexed journals. Nevertheless, the emerging presence of studies from Asia and Eastern Europe signals a growing scholarly interest in understanding online collective outrage within diverse cultural and digital ecosystems.

RQ5: What research methodologies have been employed in studies examining online firestorms?

The methodological analysis of 30 selected articles shows that research on online firestorms predominantly adopts quantitative approaches, indicating a strong reliance on empirical data and statistical analysis to measure social media behaviour, sentiment, and brand responses.

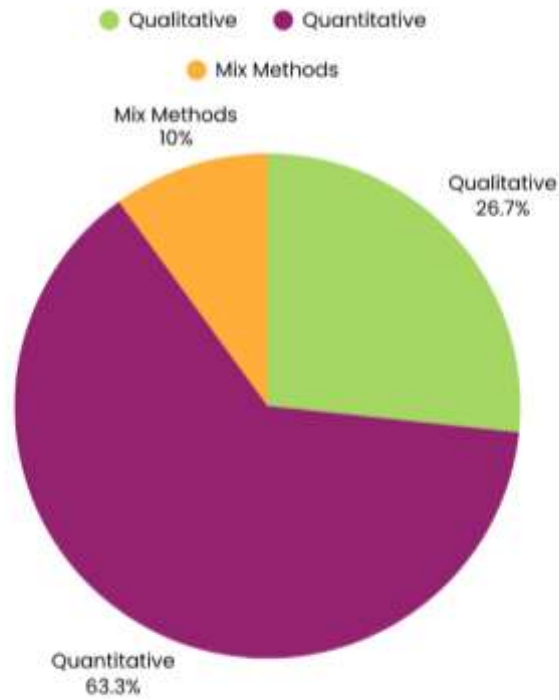


Figure 5 Methodological Distribution of Online Firestorm Studies
Source: Processed from Elsevier Scopus, October 2025

Specifically, 19 studies (63.3%) used quantitative methods, often employing surveys, content analysis, or computational modelling to assess user engagement and emotional reactions during firestorm events. Meanwhile, 8 studies (26.7%) utilized qualitative methods, focusing on interpretive approaches such as case studies, discourse analysis, and interviews to explore meaning construction, audience perception, and communication strategies in depth. A smaller portion, 3 studies (10%), implemented mixed methods, combining quantitative validity with qualitative insight to provide a more holistic understanding of the phenomenon.

This methodological pattern demonstrates a clear preference for data-driven, measurable analysis while highlighting the potential for more qualitative and interdisciplinary studies in the future. Expanding methodological diversity particularly through longitudinal and cross-cultural designs could enrich understanding of how online outrage evolves and affects brand or political reputation across digital ecosystems.

RQ6: What are the dominant research themes and theoretical perspectives explored in the literature on online firestorms?

The synthesis of thirty journal articles reveals that research on online firestorms is characterized by six major thematic clusters, each reflecting the evolution of the phenomenon from brand-focused crises to broader social and political contexts.

Table 5 Dominant Research Themes in Online-Firestorm Literature

No	Research Theme	Studies	Share (%)
1	Crisis communication & brand/CSR management (responses, SCCT, attribution, trust repair)	8	26.7%
2	Social-norm enforcement & collective sanctioning (crowd punishment, identity signaling)	6	20.0%
3	Moral emotions & online shaming (moral outrage, justice, schadenfreude/glückschmerz)	7	23.3%
4	Political communication & institutional branding (military/governmental crises, framing)	5	16.7%
5	Computational detection & sentiment analytics (early warning, NLP, human-validated sentiment)	3	10.0%
6	Leadership/governance & conflict-intelligent response (CIQ, systems/complexity)	1	3.3%

The most dominant theme is crisis communication and brand or CSR management (26.7%), where studies primarily explore how organizations respond to online outrage, examining strategies such as apology framing, corrective action, transparency, and trust repair under frameworks like SCCT and Attribution Theory. This is followed by social norm enforcement and collective sanctioning (20%), which views firestorms as digital acts of moral regulation or crowd-based punishment intended to maintain social order. A significant proportion (23.3%) of studies emphasize moral emotions and online shaming, focusing on psychological reactions such as outrage, schadenfreude, or glückschmerz that trigger participation and emotional contagion in online communities.

Meanwhile, political communication and institutional branding (16.7%) represents an emerging strand where online firestorms are analysed in relation to public perception, government trust, and political crises, such as military or policy backlash. Computational detection and sentiment analytics (10%) forms a technical research stream that develops early-warning systems using machine learning and sentiment validation models. Lastly, leadership and conflict-intelligent governance (3.3%) is a nascent but important area that integrates systems thinking to propose adaptive leadership models for managing digital outrage. Together, these themes illustrate a shift from descriptive analyses of brand crises toward interdisciplinary research encompassing psychology, sociology, politics, and computational communication.

Table 6. Dominant Theoretical Perspectives Used

No	Theoretical Perspective	Studies	Share (%)
1	Situational Crisis Communication Theory (SCCT), Attribution, Trust-repair	8	26.7%

2	Social Norms / Collective Action / Identity Signaling	7	23.3%
3	Moral-emotion & Justice frameworks (moral outrage, deservingness, affective citizenship)	7	13.3%
4	Political branding / Framing / Communication-mediation (O-S-O-R)	4	13.3%
5	Computational / Big-data sentiment & NLP models	3	10.0%
6	Leadership & Systems/Complexity (Conflict-Intelligent Leadership)	1	3.3%

The theoretical landscape of online firestorm studies indicates an increasing diversification of frameworks across communication, psychology, and computational sciences. The most frequently applied perspectives are Situational Crisis Communication Theory (SCCT), Attribution Theory, and Trust Repair Theory (26.7%), reflecting the continued dominance of crisis-management scholarship in explaining corporate or institutional responses to online outrage. This is closely followed by Social Norm Theory, Collective Action Theory, and Identity Signalling Theory (23.3%), which conceptualize firestorms as collective behavioural phenomena rooted in social identity, moral enforcement, and group polarization.

Similarly, Moral Emotion and Justice frameworks (23.3%) focus on the affective dimensions of online shaming highlighting how moral outrage, deservingness, and fairness drive viral condemnation. A smaller yet growing segment of research applies Political Branding, Framing, and Communication-Mediation Models (O-S-O-R) (13.3%) to understand how political actors and institutions manage online backlash. Computational and Big Data Sentiment Models (10%) represent a technologically driven approach that leverages natural language processing, social network analysis, and human-validated sentiment mapping to detect or predict firestorms. Finally, Leadership and Complexity Theories (3.3%) are emerging frameworks that propose adaptive and system-based models for digital conflict resolution. Collectively, these findings suggest that theoretical approaches to online firestorms are transitioning from single-discipline crisis management models toward a multi-theoretical integration that captures emotional, behavioral, and technological dimensions of collective online outrage.

RQ7: What research findings can be identified from the existing studies on online firestorms?

The analysis from thirty academic articles shows that the online firestorm (OF) phenomenon on social media is a temporary but highly damaging collective reaction marked by strong public outrage. It is defined as the rapid spread of many negative messages or complaints directed at a specific target, such as a person, company, or institution. These messages are often emotional, angry, and full of negative opinions. The spread of firestorms is supported by social media features like fast communication, simple reactions such as “like” or “dislike,” and network structures that create echo chambers, where similar views are repeated and strengthened. Studies find that OFs usually start because of moral or social norm violations, such as perceived injustice, political incorrectness, human rights issues, or market misconduct.

Sometimes, negative feelings like envy or schadenfreude also lead people to attack successful targets. At the individual level, people join firestorms mainly to gain social approval or show their group identity. Emotional reactions especially anger and moral outrage play an important role in motivating participation. Many studies note that during OFs, users rely more on quick, emotional judgments (heuristic thinking) than careful analysis (systematic thinking), often judging the target as “wrong” based on social cues like the number of negative comments. Interestingly, research also shows that anonymity is not always the main cause of aggression; in political discussions, users who reveal their identity can be more aggressive because they believe it supports social norms. The overall effects of online firestorms are serious, including damage to reputation, financial losses, and employee terminations, leading to both revenge-like complaints and reduced customer loyalty toward the target.

CONCLUSION

This systematic literature review provides a comprehensive overview of the evolution, scope, and intellectual development of research on the online firestorm phenomenon across social media contexts. The findings from thirty Scopus-indexed journal articles (2013–2025) indicate that online firestorms are recognized as a complex digital communication phenomenon shaped by emotional contagion, social norm enforcement, and algorithmic amplification. The topic has shown a clear upward publication trend, signalling increasing scholarly attention and its establishment as a significant field within digital communication, crisis management, and social behaviour studies.

Most studies were published in top-tier (Q1–Q2) journals, reflecting high methodological rigor and global academic relevance. Research has been geographically diverse but remains dominated by Western contributions, suggesting opportunities for broader cross-cultural analysis in future studies. Methodologically, quantitative approaches dominate, although a growing number of qualitative and mixed-methods designs point to an expanding theoretical and analytical diversity. Thematically, online firestorm research has evolved from brand-centred crisis management toward interdisciplinary explorations of moral emotions, identity signalling, and digital governance.

Overall, this review underscores that online firestorms are both a communicative and socio-psychological phenomenon, driven by moral judgments and collective participation within algorithmically mediated environments. Future research should integrate cross-platform, cross-cultural, and longitudinal approaches to capture the dynamics of digital outrage more holistically. There is also a need to connect traditional crisis communication models with computational and affective frameworks, offering a multi-dimensional understanding of how digital publics construct, amplify, and sustain online outrage. By bridging theory and practice, future studies can contribute to the development of more ethical, transparent, and dialogic communication strategies in managing online crises within the rapidly evolving social media ecosystem.

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