

**Crisis Communication and Image
Management:**
The Strategic Role of Social Media for Destination
Management Organizations in a Crisis Context

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Universidade da Beira Interior, Covilhã, 04 de junho de 2025.

Dedication

To my parents, Nilo and Vilma, for believing in my dreams.

To my great love, John, for your unwavering support and always being by my side.

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Resumo

A pandemia de COVID-19 impôs desafios sem precedentes aos gestores de destinos turísticos, evidenciando a relevância e o impacto das crises provocadas por catástrofes na indústria do turismo. Em momentos de crise, a imagem de um destino pode ser gravemente comprometida, levando a uma desaceleração da economia local e à interrupção das atividades comerciais, o que resulta numa redução do fluxo turístico e das receitas geradas. Estas disrupções sublinham a necessidade urgente de estratégias contemporâneas por parte dos gestores de destinos, com o objetivo de salvaguardar a imagem dos locais turísticos, restaurar a confiança dos visitantes e minimizar a percepção de risco associada ao destino.

As redes sociais afirmaram-se como uma ferramenta essencial na resposta e recuperação de crises, consolidando-se como um espaço dialógico crucial entre organizações e consumidores. No entanto, existe uma lacuna na literatura no que se refere à integração do uso de redes sociais pelas Organizações de Gestão de Destinos (OGDs) para a projeção da imagem dos destinos, promoção das suas marcas e reposicionamento no mercado durante períodos de incerteza. Neste contexto, a presente tese tem como objetivo explorar o papel estratégico das redes sociais para as OGDs durante crises na indústria do turismo, tendo por cenário de trabalho a COVID-19. Para tal, delineiam-se os seguintes objetivos específicos: (i) avaliar a literatura existente sobre a utilização do social media no turismo em períodos de crise e explorar as implicações dessas práticas; (ii) investigar as estratégias de comunicação e gestão de imagem adotadas pelas OGDs em diferentes plataformas de social media; (iii) analisar o comportamento do público digital face às estratégias de comunicação implementadas pelas OGDs em contextos de crise; e (iv) explorar a imagem dos destinos projetada no social media ao longo das diferentes fases de uma crise de longo prazo.

Para alcançar esses objetivos, foram analisadas as contas oficiais das OGDs do Brasil e de Portugal em três plataformas digitais (Facebook, Instagram e Twitter) durante os anos de 2020 e 2021. O estudo é estruturado em quatro partes principais: inicialmente, uma revisão sistemática da literatura abordando o uso das mídias sociais em contextos de crise no turismo foi realizada, cobrindo 70 artigos revisados por pares. Em seguida, foi desenvolvido um modelo de análise de conteúdo para as mensagens publicadas pelas OGDs para identificar, analisar e comparar as estratégias de gestão e comunicação de crise. O terceiro estudo envolveu uma análise de sentimentos dos comentários dos usuários para avaliar a percepção do público em relação à comunicação das organizações. Finalmente, foi

conduzida uma análise do conteúdo visual publicado pelas OGDs, considerando as fases da pandemia (antes, durante e após o isolamento).

Os resultados indicam que a organização portuguesa apresentou uma atividade significativamente maior no social media em comparação com a organização brasileira, revelando duas abordagens distintas na gestão da imagem dos destinos durante a crise, refletidas nas estratégias e nos conteúdos publicados, bem como no comportamento dos usuários. Destaca-se que o Instagram foi particularmente eficaz para a comunicação com conteúdo promocional e emocional durante a crise. As principais contribuições da tese incluem: (i) um *framework* conceitual detalhando sete mecanismos de social media essenciais para a gestão de crises no turismo; (ii) um modelo para avaliar a eficácia das estratégias de comunicação e recuperação de imagem durante crises; (iii) *insights* sobre padrões de engajamento e sentimentos dos usuários, evidenciando a eficácia do Instagram na gestão da imagem do destino e o impacto positivo de conteúdos envolventes e inspiradores; e (iv) uma análise da projeção da imagem de social media de Portugal, que revela maior engajamento durante os períodos de bloqueio e ressalta a importância de alinhar o conteúdo com a identidade do destino. A tese oferece diretrizes valiosas para acadêmicos e profissionais, proporcionando estruturas práticas e recomendações para aprimorar as estratégias de social media e manter a visibilidade da marca durante crises.

Palavras-chave

Comunicação online; Gestão de imagem, COVID-19; Social media; Turismo; Organizações de gestão de destinos; Estratégias de resposta a crise; Comportamento do usuário.

Abstract

The COVID-19 pandemic has presented unprecedented challenges to tourism destination managers, underscoring the critical relevance and impact of crises triggered by disasters on the tourism industry. In times of crisis, a destination's image can be severely compromised, leading to a slowdown in the local economy and the disruption of commercial activities, resulting in a reduction in tourist flows and revenue. These disruptions emphasize the urgent need for contemporary strategies aimed at safeguarding the image of tourism destinations, restoring visitor confidence, and mitigating the perceived risk associated with the destination.

Social media has emerged as an essential tool for crisis response and recovery, establishing itself as a crucial dialogical space between organizations and consumers. However, a gap in the literature persists concerning the integration of social media use by Destination Management Organizations (DMOs) to project the image of destinations, promote their brands, and reposition themselves in the market during periods of uncertainty. In this context, the present thesis seeks to explore the strategic role of social media for DMOs during crises in the tourism industry, with the COVID-19 pandemic as a research setting. To achieve this, the following specific objectives are defined: (i) to assess the existing literature on the use of social media in tourism during crises and explore the implications of these practices; (ii) to investigate the communication tactics and image management strategies adopted by DMOs across different social media platforms; (iii) to analyze the behavior of the digital audience in response to the communication strategies implemented by DMOs in crisis contexts; and (iv) to explore the image of destinations projected on social media throughout the various phases of a long-term crisis.

To achieve these objectives, the study analyzed the official social media accounts of DMOs in Brazil and Portugal across three digital platforms (Facebook, Instagram, and Twitter) from 2020 to 2021. The study is organized into four principal sections: First, a systematic review of the literature on social media usage in crisis contexts within tourism was conducted, encompassing 70 peer-reviewed articles. Second, a content analysis model was developed to examine the messages published by DMOs, allowing for the identification, analysis, and comparison of crisis management and communication strategies. Third, sentiment analysis of user comments was performed to evaluate public perceptions of the organizations' communication. Finally, a visual content analysis of the DMOs' posts was conducted, focusing on the pandemic phases (pre-, during, and post-lockdown).

The findings reveal that the Portuguese DMO exhibited significantly higher social media activity compared to its Brazilian counterpart, highlighting two distinct approaches to destination image management during the crisis, as evidenced by strategies, content, and user behavior. Notably, Instagram proved particularly effective in delivering promotional and emotionally resonant content. The main contributions of the thesis include (i) a conceptual framework outlining seven social media mechanisms for managing crises in tourism, (ii) a model for assessing the effectiveness of communication and image recovery strategies, (iii) insights into user engagement patterns and sentiments, demonstrating Instagram's effectiveness in managing destination image and the positive impact of engaging and inspirational content, and (iv) an analysis of Portugal's social media image projection, indicating increased engagement during lockdown periods and emphasizing the importance of aligning content with the destination's identity. This thesis provides valuable guidance for both academics and practitioners, offering practical frameworks and recommendations to enhance social media strategies and maintain brand visibility during crises.

Keywords

Online Communication; Image Management; COVID-19; Social Media; Tourism; Destination Management Organizations; Crisis Response Strategies; User Behavior.

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List of Acronyms

ANOVA	Analysis of Variance
C&A	Culture and Art
C19	COVID-19
CA	Correspondence Analysis
COVID-19	Coronavirus Disease 2019
DMO	Destination Management Organization
E-WOM	Electronic Word-of-Mouth
GA	Gastronomy
I&F	Infrastructure & Facilities
INE	Instituto Nacional de Estadística
IQR	Interquartile Range
N&L	Nature and Landscape
NLP	Natural Language Processing
NLU	Natural Language Understanding
O&A	Outdoor and Adventure
OE	Others
PP	People
RQ	Research Questions
RT-PCR	Real-Time Polymerase Chain Reaction
S&B	Sun and Beach
SARS-CoV-1	Severe acute respiratory syndrome coronavirus
SCCT	Situational Crisis Communication Theory
SLR	Systematic Literature Review
SMCC	Social-Mediated Crisis Communication
SSA	Sub-Saharan African
SVM	Support Vector Machine
TH	Tangible Heritage
UGC	User-Generated Content
UK	United Kingdom
UNWTO	United Nations World Tourism Organization
USA	United States of America
WE	Weather
WHO	World Health Organization
WoS	Web of Science
WTTC	World Travel & Tourism Council

Part I

Chapter 1 - Introduction

This first chapter aims to provide a comprehensive introduction to the subsequent chapters. It begins with an overview of the topic, emphasizing the context and significance of the subject under investigation. This is followed by a discussion of the problematization and the justification for selecting the main research theme. Additionally, this chapter highlights the research environment, the objectives of the study, and the questions it seeks to address. The subsequent subsection details the methodology, with a focus on the approach employed in each of the studies. Furthermore, the anticipated contributions of the thesis are discussed. Finally, the chapter concludes with an outline of the thesis structure, which is organized into six chapters.

1.1. General Framework

Tourism represents a significant economic sector for numerous countries due to its interconnected nature, which allows it to impact various other sectors and activities. It has the potential to generate exports, create employment opportunities, stabilize markets, and contribute to the reduction of economic inequalities (Kim & Kim, 2013). Nevertheless, the tourism industry is also highly vulnerable to external factors (Ritchie, 2004). The sector has experienced several crises, such as natural disasters (e.g., floods, hurricanes, fires, and volcanic eruptions), random events (e.g., civil unrest, accidents, crime, and disease), and economic factors (e.g., sharp fluctuations in exchange rates) (Chen et al., 2020). These events can generate a crisis in the tourism sector and damage a destination's image.

A tourism crisis is defined as any event that poses a threat to the normal operation and management of businesses within the sector, damages the overall reputation of a tourist destination, or leads to a decline in the local travel and tourism economy (Sönmez et al., 1994). Such crises can affect both tangible elements, including the physical infrastructure and facilities of a destination, and intangible aspects, such as the destination's reputation and the image perceived by tourists (Wang, 2017).

The image of a destination is a crucial factor influencing tourists' choices between destinations (Kani et al., 2017; Wang, 2017). Poor image ratings can reduce travel intentions, as tourists often avoid destinations perceived as risky (Wang, 2017). Consequently, it is imperative for the destination's image to remain robust enough to

counteract any perceptions of risk and uncertainty, thereby motivating tourists to visit the destination (Glyptou, 2020). A critical approach to image repair, alleviating negative emotions, and restoring consumer confidence involves effective crisis communication (Barbe & Pennington-Gray, 2018).

Gkritzali et al. (2018) propose that destination management organizations (DMOs) should promptly implement crisis management strategies immediately following the onset of a crisis. These strategies should be designed to recover, sustain, and revitalize normative beliefs about the destination. DMOs serve as the primary entities that integrate various authorities, stakeholders, and professionals, thereby facilitating partnerships within the tourism sector to achieve a shared destination vision (UNWTO, 2019a). Their responsibilities include the initiation, coordination, and management of activities such as tourism policy implementation, strategic planning, product development, promotion and marketing, and convention bureau operations. In times of uncertainty, it is particularly important for DMOs to cultivate emotional connections with their audiences, as emotions play a crucial role in shaping overall destination perception, influencing behavioral intentions, and maintaining competitive advantage (Taecharungroj & Pattaratanakun, 2023).

Crisis communication and management seek to deliver accurate and consistent information to the public while enhancing the image of the organization or sector during a crisis (Ritchie, 2004). In this context, social media has emerged as an effective tool for crisis communication (Freberg et al., 2013), owing to its capacity for rapid dissemination to a broad audience and facilitating interactive and shareable content (Barbe et al., 2018). Social media is recognized as an important information source and plays a significant role in tourism marketing and communications (Schroeder et al., 2013). Consequently, organizations can leverage social media to maintain public support and relations both during and after a crisis (du Plessis, 2018).

Given this context, crisis communication and image management research should advance beyond simplistic, organization-centric models. Schultz et al. (2011) advocate for a more nuanced perspective that considers the interactive and inter-organizational negotiation of reality among affected organizations and stakeholders over time. Building on this perspective, a thorough analysis is needed to examine the effects of different response strategies on communication dynamics and stakeholder responses during a crisis.

1.2. Research Justification

The COVID-19 pandemic has introduced unprecedented challenges to global travel (Zenker & Kock, 2020), further exacerbated by stringent travel restrictions, which have made the crisis more complex and enduring than previous disruptions (Canhota & Wei, 2021). This situation has become a central focus in the field of tourism crisis communication (Liu-Lastres, 2022), leading to significant shifts in research priorities. Considering the prolonged duration of this crisis, researchers have had the opportunity to analyze strategic adaptations and long-term recovery efforts undertaken by DMOs throughout different phases of the crisis (Taecharunroj & Pattaratanakun, 2023).

Amidst the mobility constraints imposed, tourism destinations primarily existed in the virtual realm, prompting DMOs to maintain an active presence on social media platforms (Pachucki et al., 2022; Pasquinelli et al., 2022). As key actors in destination management, DMOs are tasked with developing and implementing marketing strategies aimed at attracting prospective tourists and fostering economic development (Molina et al., 2020). However, it remains unclear how these platforms were strategically employed during a period when DMOs were unable to actively encourage travel to their destinations. This raises a central question: how can destination management organizations strategically leverage social media during a crisis to sustain brand visibility and remain top of mind with their target audience?

The advent of social media has transformed the communication landscape for tourism marketing as well as for crisis response and recovery practices (Park et al., 2019). According to Liu et al. (2024), destination marketers develop and implement social media affordance strategies to cultivate and promote a positive image of their destinations in the market. Nevertheless, Senthil and Goswami (2020) argue that the conventional communication strategies employed by DMOs become ineffective in times of crisis. Despite this, Wang and Ye (2017) emphasize the lack of studies assessing the appropriateness and effectiveness of crisis communication, including its distribution and content, during and after a crisis.

Additionally, according to Taecharunroj and Pattaratanakun (2023), existing crisis communication frameworks, such as the Situational Crisis Communication Theory (SCCT), often overlook the marketing strategies employed during periods of stability. Also, conventional theories focus on business crisis responses and may not fully capture the complexities of tourist destination management, which involves multiple stakeholders and broader socio-economic contexts (Barbe et al., 2018; Oliveira &

Huertas, 2019). This limitation underscores the need to expand crisis response frameworks to better address the specific needs of tourist destinations.

Numerous studies have examined disasters and crises within the tourism sector, focusing predominantly on natural disasters such as hydro-meteorological events (e.g., tsunamis, hurricanes, fires), political crises, and terrorism (Eckhardt et al., 2019; Mikulić et al., 2018; Stephenson et al., 2013). However, these studies are often localized or case-specific, typically addressing crises in specific geographic regions. While recent research has illuminated aspects of DMOs' communication strategies during the COVID-19 pandemic, much of this work is confined to a single country (e.g., Joseph & Anandkumar, 2021; Pachucki et al., 2022). Furthermore, these studies overlook the diverse range of social media strategies employed by destinations worldwide during regular times and crises (Taecharunroj & Pattaratanakun, 2023). Consequently, research on pandemic-induced crises with a global impact remains relatively scarce compared to studies on tourism-related crises and disasters.

Moreover, effective communication during a crisis requires strategic social media management, taking into account that different platforms vary in scope and functionality (Chandrasekaran et al., 2023). However, studies examining communication across multiple countries often focus on a single social media platform (e.g., Taecharunroj & Pattaratanakun, 2023). Most research on social media in crisis communication and tourism promotion has concentrated on Twitter (e.g., Barbe & Pennington-Gray, 2018; Huertas & Oliveira, 2019) and Facebook (e.g., Clement, 2020; Ketter, 2016; Mariani et al., 2016). Given this, exploring additional sources could yield new insights and findings (Drus & Khali, 2019).

In this context, understanding the impacts of COVID-19 on tourism and the utilization of social media for destination image management is necessary for developing effective recovery strategies and fostering transformation within the tourism sector. This study aims not only to review the current state of research on tourism crisis communication and destination image but also to offer practical insights for professionals and contribute to the broader body of knowledge.

1.3. Context of Analysis

The travel and tourism sector represents a significant component of the global economy, encompassing activities across destinations worldwide. Over recent decades, the sector has experienced consistent growth, emerging as one of the most influential segments in

the global economy. In 2019, the sector accommodated 1.46 billion international travelers, generating US\$ 1,478 trillion in international revenues and US\$ 1,732 trillion in exports, which accounted for 7% of global exports (UNWTO, 2020a).

However, in 2020, the tourism sector was severely affected by the outbreak of the Coronavirus (SARS-CoV-2), widely known as COVID-19 (Coronavirus Disease 2019). The World Health Organization (WHO) officially declared COVID-19 a global pandemic on March 11, 2020 (WHO, 2020). In response, numerous countries implemented strict travel restrictions and closed commercial and educational establishments, significantly disrupting tourism activities (Avraham, 2021). The effects of the pandemic persisted into the second half of 2021, when countries began reopening their borders. By mid-June 2021, improved management of the health crisis led to a notable decline in infection rates and a gradual easing of mobility restrictions, which facilitated the progressive recovery of international tourism (UNWTO, 2022).

Following the implementation of travel restrictions in April 2020, international tourist arrivals in the first quarter of 2020 fell by 22%, resulting in a loss of 67 million arrivals and approximately US\$80 billion in revenue (UNWTO, 2020b). According to UNWTO data (2021), 2020 marked the most challenging year on record for global tourism, with international arrivals plummeting by about 74%. This severe decline jeopardized between 100 and 120 million direct tourism jobs, with small and medium-sized enterprises being particularly affected.

In response to the WHO's declaration of COVID-19 as a pandemic on March 11, 2020 (WHO, 2020), many countries imposed travel restrictions, and commerce and educational institutions began to close in late March and early April 2020 (Avraham, 2021). To curb the spread of the virus, numerous nations implemented comprehensive travel bans, barring tourists from entering their territories. By mid-June 2021, some countries had successfully managed the pandemic and started to reopen to tourists. These destinations saw a significant reduction in COVID-19 cases, which enabled the resumption of tourism activities due to the easing of mobility restrictions and the introduction of measures such as the Digital COVID Certificate. The incidence of the virus remained low, largely attributable to increased vaccination rates (UNWTO, 2022).

According to Gössling et al. (2020), despite the occurrence of three pandemics in the 20th century and four in the 21st century, the impact and recovery from the COVID-19 pandemic have been unprecedented. This is attributed to its global scale and the extensive disruption of travel, business, and social activities. Sigala (2020) highlights

that the COVID-19 pandemic is distinct from previous crises in terms of its life cycle, nature, impacts, and policy responses, including the implementation of lockdowns and travel restrictions aimed at controlling the spread of the virus. These governmental measures have profoundly affected tourism, confining previously active travelers to their homes and generating significant negative emotions and stress (Lenggogeni et al., 2022).

Portugal presents a notable case during the pandemic. In response to the surge in tourism activity and the COVID-19 pandemic, the Portuguese government enacted several measures to contain the virus and mitigate its impacts on the tourism sector, as outlined in Decree-Law No. 10-A (2020). Despite these efforts, 2020 saw a dramatic decline in tourism activity, with non-resident overnight stays in tourist accommodation establishments falling by more than 60%. The most significant reductions were observed in the Irish (-89.7%), North American (-87.4%), and Chinese (-81.9%) markets (INE, 2020b).

In 2020, Portugal was relatively less affected by the Coronavirus, ranking 48th globally in terms of total cases (58,633) and 39th in deaths (1,827) (Johns Hopkins, 2020). However, the situation deteriorated in early 2021, with the country reporting 765,414 cases and 14,158 deaths by February 8, 2021 (Johns Hopkins, 2021). This escalation prompted the reintroduction of stringent measures initially implemented at the pandemic's onset, leading to a significant interruption in tourism activity, as stipulated by Decree-Law No. 9-A (2021).

In 2022, international tourism in Portugal exceeded expectations, driven by strong pent-up demand and the easing of travel restrictions in many countries. Portugal welcomed 22.3 million tourists that year, a figure double that of 2021 but still 9.6% below the 2019 levels (INE, 2022). Significant adjustments were made to address health and safety concerns, including the introduction of the Clean & Safe seal by regional entities and the national DMO, Turismo de Portugal. These adjustments involved implementing safety protocols, adapting products and services, and enhancing digital communication strategies (Ferreira et al., 2024). By the end of the first quarter of 2023, Portugal showed a growth rate of approximately 11% compared to the same period in 2019, while European countries overall experienced a decline of more than 15% (TravelBI, 2023). This indicates that Portugal's tourism sector demonstrated considerable resilience and adaptability in recovering from the pandemic's impacts.

In contrast, Brazil experienced severe impacts from COVID-19. As of September 2, 2020, Brazil was the second most affected country globally, with 395,093 cases and 122,596

deaths (Johns Hopkins, 2020). Brazil ranked third by February 8, 2021, with 9,524,640 cases and 231,534 deaths, behind only the United States and India (Johns Hopkins, 2021). Despite the escalating number of cases, Brazil did not implement restrictions on the entry of foreigners until December 2020. At that point, the country required proof of a laboratory test (RT-PCR) for SARS-CoV-2 infection as per Ordinance No. 630 (2020) and temporarily banned flights originating from or passing through the United Kingdom and Northern Ireland according to Ordinance No. 648 (2020).

The influx of international tourists to Brazil began to rise after July 2022, with the country receiving approximately 3.6 million international visitors, who collectively contributed around US\$ 4.9 billion to the Brazilian economy (UNWTO, 2022). This figure, however, indicates a modest recovery relative to pre-pandemic levels observed in 2019. This limited recovery may be attributed to the lingering impacts of the COVID-19 pandemic, as evidenced by the fact that, as of March 8, 2022, Brazil had reported over 30 million COVID-19 infections and 652,000 confirmed deaths (Tasso et al., 2023).

Given this context, the research focuses on Brazil and Portugal as its geographical scope. This choice allowed us to observe the different responses and adaptations of DMOs to the crisis, considering the particularities of each country, such as the structure of the tourism sector, the role of the government in control measures, and the characteristics of the target audience on social media.

Both countries maintain a significant presence on social media platforms. In 2023, Brazil ranked fifth globally in terms of social media users, following China, India, the United States, and Indonesia, with approximately 171.17 million users (Statista, 2024). In Portugal, the number of social media users reached approximately 7.43 million in 2024, representing 72.6% of the total population (DataReportal, 2024).

Furthermore, both destinations have significant tourism sectors, with Brazil being one of the largest tourist destinations in Latin America and Portugal holding a prominent position in Europe. However, Portugal is considered a highly mature destination with a well-established tourism industry. In 2018, the country welcomed 22.8 billion international tourist arrivals and generated US\$19.621 billion in international revenues (UNWTO, 2019b). Over the preceding decade, international arrivals had increased by 232% (UNWTO, 2011). In 2019, Portugal recorded approximately 24.6 million arrivals of non-resident tourists, representing a 7.9% increase compared to the previous year and exceeding the 7.5% growth observed in 2018 (INE, 2020a). The country achieved significant recognition on the global tourism stage, being named the World's Best Tourist

Destination by the World Travel Awards in 2017, 2018, and 2019 (Turismo de Portugal, 2019) and ranked 12th in the Travel and Tourism Competitiveness Report (WTTC, 2019). On the other hand, despite its diverse range of tourism offerings, Brazil did not experience growth in international tourist arrivals. In 2019, the country recorded 6.621 million international arrivals, the same figure as in 2017, generating USD 5.917 billion in international tourism revenue (UNWTO, 2019b).

Therefore, considering the global nature of the pandemic, examining the social media communications of different DMOs can enhance the understanding of digital marketing strategies during both crisis and normal periods (Taecharungroj & Pattaratanakun, 2023). In this context, Uşaklı et al. (2017) emphasize the importance of researching emerging destinations, particularly those with limited financial and human resources to invest in traditional marketing campaigns.

1.4. Research Objective

This thesis aims to explore the strategic role of social media for Destination Management Organizations (DMOs) during crises in the tourism industry, using the COVID-19 pandemic as a research setting.

To address this overarching aim, the study outlines the following specific objectives:

- i. To assess the existing literature on the use of social media in tourism during crises and explore the implications of these practices.
- ii. To investigate the communication tactics and image management strategies adopted by DMOs across different social media platforms.
- iii. To analyze the behavior of the digital audience in response to the communication strategies implemented by DMOs in crisis contexts.
- iv. To explore the image of destinations projected on social media throughout the various phases of a long-term crisis.

Based on the four research objectives outlined, the following research questions were formulated:

- i. What are the implications of social media for the tourism industry during a crisis?
- ii. How may DMOs engage with stakeholders on social media during prolonged crises?
- iii. What are the public's prevailing sentiments toward destination communications on various social media platforms during a prolonged crisis?

- iv. What strategic approaches does the destination employ to maintain its image during a crisis?

Table 1.1 outlines the correlation between the research questions, the proposed objectives, and the corresponding chapters of this study.

Table 1.1. Research Questions/Proposed Objectives Matrix

Objectives/ Research questions	General Objective: To explore the strategic role of social media for DMOs during crises in the tourism industry.			
	Specific Objective 1	Specific Objective 2	Specific Objective 3	Specific Objective 4
	To assess the existing literature on the use of social media in tourism during crises and explore the implications of these practices.	To investigate the communication tactics and image management strategies adopted by DMOs across different social media platforms.	To analyze the behavior of the digital audience in response to the communication strategies implemented by DMOs in crisis contexts.	To explore the image of destinations projected on social media throughout the various phases of a long-term crisis.
What are the implications of social media for the tourism industry during a crisis?	Chapter 2			
How may DMOs engage with stakeholders on social media during prolonged crises?		Chapter 3		
What are the public's prevailing sentiments toward destination communications on various social media platforms during a prolonged crisis?			Chapter 4	
What strategic approaches does the destination employ to maintain its image during a crisis?				Chapter 5

1.5. Methodology

Galliano (1979, p. 16) defines science as "the rational, systematic, exact, and verifiable knowledge of reality." According to Koche (2011), the pursuit of science is driven by the search for answers to questions that foster a deeper understanding of oneself and the world. Scientific knowledge is transmitted through specialized education and is acquired through rational means, utilizing established scientific procedures (Lakatos & Marconi, 2011). Tribe and Liburd (2016) observe that problem-centered knowledge is generated within specific contexts, driven by the practical need to address real-world issues. In the

tourism sector, problem-solving often depends on the tacit and experiential knowledge of diverse stakeholders, including consumers, service providers, and local communities.

This type of knowledge mobilizes a range of theoretical frameworks and methodological approaches. It is inherently extra-disciplinary and guided by a functionalist epistemology that values practical, applicable, and efficient forms of knowledge. Its primary goal is not only to understand current practices but also to improve and transform them. As a result, problem-centered knowledge raises a wide spectrum of socioeconomic and scientific questions that are best addressed through context-sensitive strategies and solutions (Tribe & Liburd, 2016).

1.5.1 Research Methodology

Methodological procedures provide a framework for guiding the intended research, making it essential to develop a detailed research plan that focuses on understanding the problem under study and determining the appropriate direction to pursue (Thiolent, 2005). The methodology defined in this thesis, particularly the methods for analyzing empirical data, is closely aligned with the research objectives and questions.

The research will be conducted empirically, aligning with Popper's (2003) assertion that "it must be possible to refute, through experience, an empirical scientific system" (p. 42). This perspective underscores the provisional nature of knowledge in Popper's framework. Accordingly, this theoretical stance suggests that scientific theories, in the absence of falsification, persist as hypotheses or conjectures indefinitely (Popper, 2008). As noted by Demo (2000), empirical research is primarily concerned with codifying the measurable aspects of social reality.

This thesis adopts a mixed-methods approach, integrating both quantitative and qualitative analyses to comprehensively understand social media use in tourist destinations during times of crisis. Utilizing both primary and secondary data ensures a more thorough investigation of the research problem. The rationale for employing mixed methods lies in the ability to combine these approaches within a single study, thereby providing insights that would be incomplete if only one method were applied (Venkatesh et al., 2013).

Qualitative research, which emphasizes understanding meaning within context, necessitates data collection instruments that are adept at capturing and interpreting underlying meanings (Merriam, 2009). La Ville and Dionne (1999, p. 227) assert that "the researcher decides to focus on the nuances of meaning that exist between the units,

the logical links between these units or between the categories they bring together." Consequently, qualitative analysis supports an interpretative examination of information and the development of theoretical generalizations (Flick, 2015).

In contrast, quantitative research operates on the premise that phenomena can be quantified, translating opinions and information into numerical data for classification and analysis. This approach relies on statistical resources and techniques (Lakatos & Marconi, 2011). It is characterized by its objective nature and maintains a necessary distance between the researcher's values and the research object (Durkheim, 1999). The integration of qualitative and quantitative methodologies allows for a more comprehensive understanding of the context and phenomenon under study (Jick, 1979).

Lakatos and Marconi (2011) identify four research approaches: (1) inductive, (2) deductive, (3) hypothetical-deductive, and (4) dialectical. The inductive method progresses from specific observations to broader laws and theories, whereas the deductive method begins with established laws and theories to predict specific phenomena. This research predominantly employs a deductive methodology, as its objective is to advance the development of existing theories related to crisis communication.

Considering the objectives of this study, it is classified as descriptive and exploratory research. This classification stems from the study's aim to contribute to the scientific understanding of crisis communication and marketing within tourist destinations. According to Gil (2002), descriptive research seeks to delineate the characteristics of a specific population or phenomenon and to ascertain relationships between variables. The exploratory research allows for a comprehensive examination of how the topic is addressed by the actors involved (Yin, 2017).

This research examines the topic using a cross-country and cross-platform comparative approach to highlight differences and similarities in digital communication strategies. Cross-country comparative research involves examining specific issues or phenomena across two or more countries to understand how they manifest in different socio-cultural contexts, thereby generating new insights for research, policy, and practice (Hantrais & Mangen, 1996). In this context, the study focuses on the social media strategies adopted by the official DMOs of two tourism destinations—Brazil and Portugal—during the pandemic. The analysis centers on the organizations responsible for the international promotion of these destinations.

The analysis centers on the official DMOs responsible for the international promotion of these destinations. In Brazil, Embratur, established in 1966, is responsible for promoting Brazilian destinations abroad and managing the country's image through its social media presence, particularly the "@VisitBrasil" profile. In Portugal, Turismo de Portugal undertakes similar responsibilities, managing the "@VisitPortugal" profile.

Using publicly available data for analysis significantly reduces the cost, effort, and time associated with conducting large-scale public opinion surveys (Sharda et al., 2014). Accordingly, this study extracted data from Facebook, Instagram, and Twitter (now known as "X"). These platforms were selected based on their extensive user bases, active engagement from companies and organizations, and the availability of accessible data. Each platform differs considerably in terms of services, audience reach, and patterns of use (Minazzi, 2015). Facebook and Twitter have been widely utilized in research on crisis management in tourism destinations (e.g., Barbe & Pennington-Gray, 2018; Huertas & Oliveira, 2019; Huertas et al., 2020; Ketter, 2016; Mariani et al., 2016). As Hays et al. (2013) note, DMOs are most actively engaged on Facebook and Twitter, with YouTube being used less frequently. Instagram was included in this study due to its strong potential for content production and the generation of user-generated content (UGC), offering a rich environment for observational analysis (Fontgalland et al., 2022). Its relevance in crisis-related research has been increasingly recognized since 2021, particularly with its influence on public emotions (Filiari et al., 2021; Lenggogeni et al., 2022; Pasquinelli et al., 2022).

1.5.2 Approach of the Studies

This thesis is organized into four studies to explore the strategic role of social media for DMOs during crises in the tourism industry.

Study 1 - Deciphering Social Media's Role in Tourism During Crises: A Scientific Examination

This initial study adopts a qualitative approach and involves a systematic literature review (SLR) addressing the role of social media in the tourism industry within a crisis context. The SLR methodology facilitates an objective and comprehensive review of existing literature on a specific topic (Tranfield et al., 2003), employing a rigorous, replicable, scientific, and transparent process (Gomezelj, 2016). It constitutes an independent research effort aimed at exploring a clearly defined question through existing studies (Denyer & Tranfield, 2009).

The objectives of this study are threefold: (i) to compile and evaluate the state-of-the-art growth and development in the field, (ii) to investigate how social media has been utilized as a mechanism for managing crises and its implications for the tourism industry, and (iii) to identify potential directions for future research.

Data for the review was sourced from the Scopus® database and the Web of Science™ Core Collection (WoS). Keywords used in the search included touris* or destination or travel) AND (disaster or crisis or hazard) AND ("social media" or "digital platform" or "web 2.0" or "social web" or "electronic communication" or "digital channels"). The review encompassed 70 peer-reviewed articles published in English-language journals up to 2022. A content analysis was performed to extract and document the most relevant information. Elements were categorized analogously and progressively based on frequency, with categories emerging from the data rather than being predefined, reflecting recurring themes in the content (Bardin, 1977).

Study 2 - Emerging Strategies for Crisis Communication and Reputation Management in Tourist Destinations Via Social Media Platforms

The second study focused on examining the communication tactics and image management strategies adopted by DMOs across various social media platforms. The specific objectives included identifying content disparities across platforms, comparing communication tactics between Brazil and Portugal, and evaluating audience reactions.

To achieve this, 1,611 messages posted by DMOs from Brazil and Portugal on Facebook, Instagram, and Twitter were analyzed. The data collected for analysis spans a period of 16 months, from March 1, 2020, to June 30, 2021, coinciding with the global escalation of the coronavirus. Content analysis was chosen as the research method due to its ability to systematically and validly infer meaning from textual data (Bardin, 1977). This qualitative approach is exploratory and allows for a comprehensive examination of how the topic is addressed by the actors involved (Yin, 2017). A framework was developed to assess the messages posted by official accounts of Brazilian and Portuguese DMOs on these platforms from March 2020 to June 2021.

The analysis was structured into three parts: (1) Communication Characteristics, (2) Message Content, and (3) User Reaction. Messages were coded according to the typology of online communications and the communication strategies outlined in the Situational Crisis Communication Theory (SCCT). According to Hays et al. (2013), analyzing the content across major social media platforms helps in understanding how these platforms are utilized, the differences between them, and the extent of their use by DMOs. User

reaction was assessed based on metrics such as the number of likes and comments to gauge the impact of the organization's responses.

Study 3 - Analyzing Digital Public Behavior in Response to Destination Management Organizations' Social Media Communications During a Crisis

The third study aimed to analyze digital public behavior in response to communications from DMOs on social media during a crisis. This analysis seeks to uncover user behavior patterns in crisis contexts to enhance DMO communication strategies.

The study analyzed 20,029 user comments on the same social media platforms utilized by the DMOs in Brazil and Portugal—Facebook, Instagram, and Twitter—between March 2020 and June 2021, as outlined in Study 2. The user comments were analyzed based on the 1,611 messages examined in Study 2. Although the dataset was multilingual, English was the most frequently used language, followed by Portuguese and Spanish—these three languages were selected for analysis.

Sentiment analysis was applied to assess the emotional tone of these comments, distinguishing between positive and negative sentiments related to the image of the tourist destinations as portrayed on the DMOs' social media profiles. According to Gkritzali et al. (2018), sentiment analysis involves natural language processing (NLP), text analysis, and computational linguistics to extract subjective information from textual content. This opinion-mining technique seeks to identify and categorize attitudes expressed toward specific issues (Kirilenko et al., 2017).

To uncover trends and patterns in public sentiment, the research employed NLP tools supported by correspondence analysis, robust ANOVA, and word frequency analysis. The findings offer insights into dominant public sentiments toward destination communication during the pandemic, preferences for specific social media platforms, and perceived risk as reflected in user engagement.

Study 4 - Adapting Tourism Promotion During Crisis: A Visual Content Analysis of Portugal's Instagram Strategy

The final study aimed to examine the tourism image of Portugal as projected by the DMO on social media across different phases of the crisis. The chosen methodology was visual content analysis, which focuses on deriving factual and descriptive insights from the images posted on social media. (Bell, 2004). This approach emphasizes the analysis of

the composition and elements of photographs rather than their contextualization (Fileri et al., 2021; Mak, 2017; Pasquinelli et al., 2022; Stepchenkova & Zhan, 2013).

A total of 763 photographs posted by Portugal's DMO on Instagram from September 2019 to December 2021 were analyzed. Instagram was selected for this study due to its ability to combine the evocative potential of images with concise and impactful text content (Gon, 2021). The analysis covered three distinct periods, pre-lockdown, lockdown, and post-lockdown, to evaluate the destination's online promotional strategies during these phases.

The data analysis involved frequency analysis, co-occurrence analysis, and variation rate analysis. User engagement on Instagram was assessed by examining the number of likes and comments to identify the attributes most valued by the public. Additionally, a one-way analysis of variance (ANOVA) using the Kruskal-Wallis nonparametric test was conducted to evaluate differences across the three periods.

Table 1.2 offers an overview of the individual studies developed throughout this thesis.

Table 1.2. Comparison of the structure of the studies in the thesis

Study	Study 1	Study 2	Study 3	Study 4
Objective	To examine the current research landscape regarding the utilization of social media within the tourism industry during crisis time.	To scrutinize the utilization of social media platforms by DMOs to engage with stakeholders during the pandemic and the audience reactions to their communications to discern a set of best practices for crisis communicators.	To analyze public behavior in response to the communication efforts of destination management organizations across multiple social media platforms during the COVID-19 pandemic.	To identify how DMOs have used social media to project their image, promote their brands, and position themselves within markets during uncertain times.
Specific objectives	(i) to compile and assess state-of-the-art growth and development, (ii) to investigate the utilization of social media as a mechanism for coping with crises and their implications for the tourism industry, and (iii) to identify potential avenues for future research.	(i) to identify content disparities across platforms, (ii) to compare communication tactics between the two destinations, and (iii) to evaluate audience perceptions.	(i) to elucidate user behavior patterns on social media, (ii) to identify the social media platforms preferences, and (iii) to evaluate the perceptions on online communication strategies.	(i) Identify the composition of the image projected online during the pandemic. (ii) Analyze adaptive strategies during the different phases of the pandemic. (iii) Explore best practices in image management during a crisis.
Research questions	1) How representative is research on social media in the tourism crisis? 2) What topics and subjects are considered in the literature? 3) How has social media been applied to coping with tourism crises?	1) What are the communication characteristics of the DMOs' official profiles in Brazil and Portugal on social media? 2) During the COVID-19 pandemic, what strategies have DMOs employed to engage with their respective audiences using social media platforms? 3) What are the audience's reactions to DMO messages on social media in different media types?	1) What are DMOs' online communication characteristics during the pandemic? 2) What are the public's prevailing sentiments regarding destination communications during the pandemic? 3) Do preferences for social media platforms vary significantly in the context of a crisis? 4) How do different categories of online communication influence users' sentiments on social media? 5) What impact has DMOs' communication on social media had on the public's perception of risk?	1) What are Portugal's predominant image attributes, as presented by the official DMO on Instagram, before, during, and after the COVID-19 crisis? 2) What is Portugal's projected online image composition throughout the pandemic? 3) Was there a notable change in the destination's image projection during these phases? 4) How did users react to Portugal's image projection during the different phases of the pandemic?
Database	70 articles collected from the Web of Science (WoS) and Scopus databases.	1611 posts posted by DMOs in Brazil and Portugal on Facebook, Instagram, and Twitter.	20,029 user comments on the social media of the DMOs in Brazil and Portugal on Facebook, Instagram, and Twitter.	763 photographs posted by Portugal's DMO on Instagram.
Analysis method	Systematic Literature Review - Content Analysis.	Content analysis and average rate analysis.	Sentiment analysis - correspondence analysis, Robust ANOVA, and word frequency analysis.	Visual content analysis - frequency analysis, co-occurrence analysis, variation rate analysis, ANOVA

1.6. Thesis Contributions

This research has enhanced the understanding of the role of social media for DMOs in communicating and restoring the image of tourism destinations during a crisis. Each study (Chapters 2, 3, 4, and 5) within this work has addressed and filled gaps identified in the existing literature. By examining the impacts of COVID-19 on tourism and the utilization of social media for managing destination image, this research provides valuable insights for developing effective recovery strategies and facilitating processes of change and transformation in the tourism industry.

Chapter 2 presents a systematic literature review, surveying and systematizing existing studies in the field. The findings underscore the growing significance of social media during the COVID-19 pandemic. This chapter (i) outlines the transformations within the research domain, (ii) describes a conceptual framework consisting of seven social media mechanisms for crisis management in the tourism industry, and (iii) provides a roadmap for future research. The insights from this chapter bridge the gap between academia and practice, offering valuable references for practitioners to develop and implement effective crisis response strategies.

Chapter 3 shows what strategies DMOs can employ to enhance the effectiveness of their crisis response through social media platforms. This chapter contributes by (i) introducing how DMOs can implement marketing digitally by adapting the message content on social media during a crisis, (ii) enriching crisis communication theories by identifying innovative response tactics employed by tourist destinations, and (iii) proposing a practical communication framework tailored specifically for DMOs.

Chapter 4 offers a detailed analysis of how organizational efforts and consumer interactions influence perceptions and engagement during a crisis. This chapter (i) provides practical guidance for tourist destinations looking to improve their digital presence in crisis situations, (ii) illustrates communication and marketing strategies to address and mitigate negative UGC, emphasizing promotional and emotional messaging, (iii) identifies Instagram as particularly effective for digital marketing and image recovery in crisis contexts, and (iv) highlights the importance of DMOs' communication in shaping digital public risk perception.

Chapter 5 examines the projection of a tourist destination's image during times of uncertainty. Specifically, this chapter (i) advances the literature on destination image projection by providing new insights into effective online marketing strategies during

crises, and (ii) offers practical guidelines and recommendations for DMOs to enhance tourism promotion through the strategic selection of image attributes and visual content for social media use in crisis contexts.

The COVID-19 pandemic has accelerated the digital transformation in tourism, necessitating research that addresses the evolving purposes, uses, and technologies influencing societal and economic changes. This thesis contributes to the contemporary literature on social media marketing in tourism by facilitating the development of strategies to mitigate perceived risks, restore tourist confidence, and enhance destination image during crisis contexts.

1.7 Thesis Structure

The present research is structured into three main parts (See Figure 1.1):

Part one comprises Chapter 1, which serves as the introduction to the thesis. It is organized into seven subsections. The chapter begins by outlining the general framework of the research theme, followed by a justification for the study. It then highlights the context of analysis, the research objectives, and the key research questions. The subsequent subsection presents the methodology, emphasizing the approach adopted in each study. This chapter also discusses the anticipated contributions of the thesis. Finally, it concludes with a description of the overall structure of the thesis.

Part Two comprises four chapters, each dedicated to a distinct scientific study. Chapter 2: Deciphering Social Media's Role in Tourism During Crises: A Scientific Examination. Chapter 3: Emerging strategies for crisis communication and reputation management in tourist destinations via social media platforms. Chapter 4: Analyzing Digital Public Behavior in Response to Destination Management Organizations' Social Media Communications During a Crisis. Chapter 5: Adapting Tourism Promotion During Crisis: A Visual Content Analysis of Portugal's Instagram Strategy Amid COVID-19.

Part Three comprises Chapter 6, titled *Concluding Remarks*. This final chapter is structured into four distinct subsections. The first subsection presents a summary of the main findings, addressing each research objective and responding to the research questions outlined in Chapter 1. This is followed by a discussion of the study's contributions to academic knowledge and its practical implications for DMOs. The chapter concludes with an overview of the study's limitations and suggestions for future

research, highlighting areas insufficiently explored and identifying opportunities for further investigation.

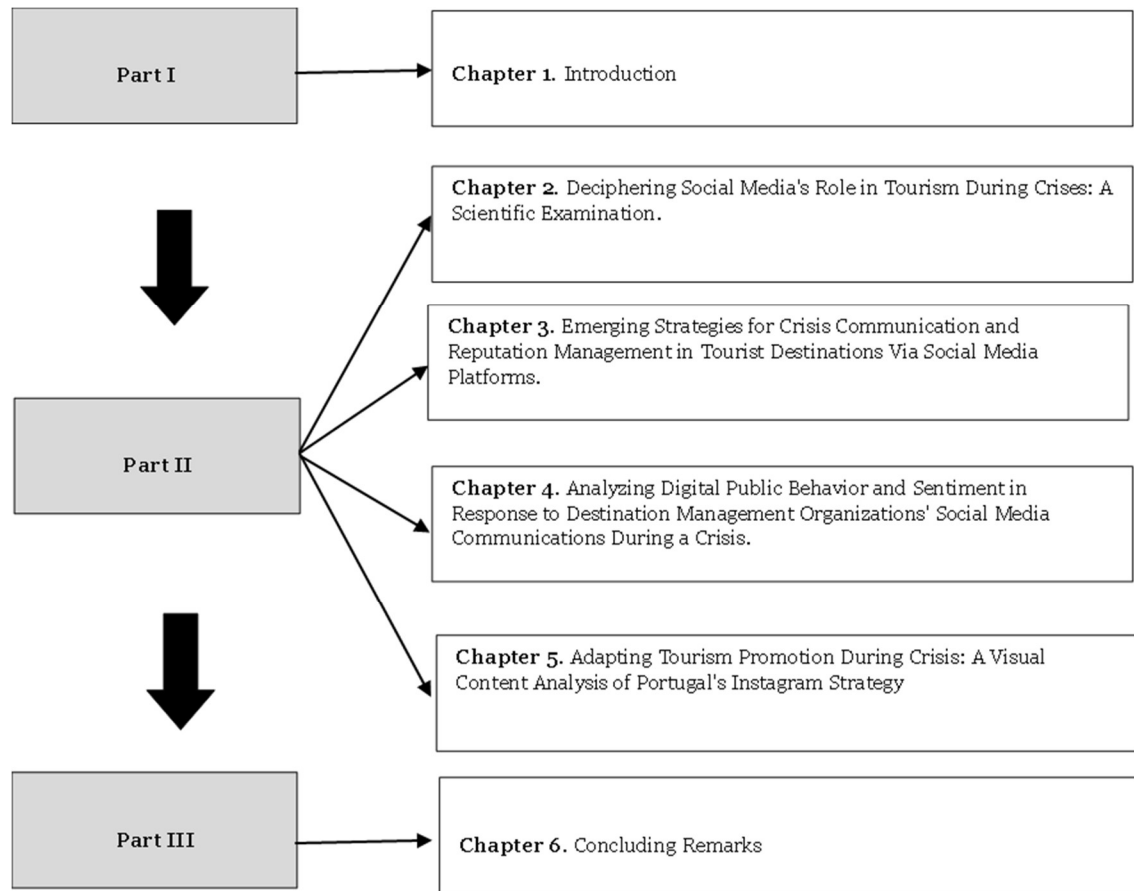


Figure 1.1. Thesis structure

Part II

Chapter 2 - Deciphering Social Media's Role in Tourism During Crises: A Scientific Examination

This chapter presents the first study of this thesis, which examines the current research landscape regarding the utilization of social media within the tourism industry during crises, recognizing the sector's susceptibility to external factors. A systematic review of 70 peer-reviewed articles published in English-language journals covered the years until 2022. The findings reveal the increasing relevance of social media during the COVID-19 pandemic. The study (i) presents the transformations in the research area, (ii) describes a conceptual framework of seven social media mechanisms for the tourism industry coping with a crisis, and (iii) offers a roadmap for future studies. The findings may connect academics and practices and serve as references for practitioners to identify and develop effective crisis responses.

2.1. Introduction

The tourism industry is notably vulnerable to various external influences, including natural disasters such as floods, hurricanes, fires, or volcanic eruptions; unpredictable occurrences such as civil unrest, accidents, crime, and disease outbreaks; and economic factors like sharp fluctuations in exchange rates (Chen et al., 2020). The recent COVID-19 pandemic serves as a prominent illustration, profoundly affecting tourism on a global scale and prompting scholars' focused attention on devising strategies and measures to alleviate the significant repercussions of the crisis on the tourism sector (Huang & Wang, 2023).

According to Sönmez et al. (1994), a tourism crisis is any occurrence that can threaten the normal functioning and conduct of tourism-related business, damage the overall reputation of a tourism destination for safety, attractiveness, and visitor comfort, cause a downturn in the local travel and tourism economy; and interrupt the continuity of business operations by reducing tourist arrivals and spending.

During periods of uncertainty, effective crisis management within the tourism industry is imperative to mitigate the impact on tourists' trust and risk perception (Sigala, 2011). Coombs (2015) underscores that crisis communication strategies among stakeholders constitute a central axis of crisis management, necessitating consideration of the crisis type and the organization's accountability. Furthermore, Scott et al. (2008) emphasize the pivotal role of information flow as a critical concern in crisis management efforts.

In this context, social media has emerged as a potent instrument for crisis communication (Sigala, 2011), primarily due to its rapid information dissemination, extensive and diverse audience reach, and interactive capabilities at minimal cost (Barbe & Pennington-Gray, 2018; Oliveira & Huertas, 2019; Valentini, 2015).

Although research on crisis communication in tourism and hospitality has produced a large corpus of literature since 1980 (Upadhyay et al., 2023), articles published concerning the role of social media in crisis communication only emerged in the 2010s, when the use of this media proliferated in the tourism industry (Liu- Lastres, 2022). Notwithstanding the short time, review articles on crisis management research in hospitality and tourism (Liu-Lastres, 2022; Upadhyay et al., 2023; Wut et al., 2021) have pointed out that social media has become an emerging topic in academia. However, despite its growth and importance, the precise focus of scientific inquiry remains opaque. Consequently, there is a pressing need to elucidate the themes explored and the evolving domain knowledge to catalyze future research endeavors.

According to Liu-Lastres (2022), the efficacy of social media in crisis communication is extensively acknowledged. However, the literature addressing the role of social media within the tourism industry in coping with crises remains largely unexplored. In a non-crisis context, previous literature indicates that social media platforms perform different functions for users and organizations. For instance, Whiting and Williams (2013) have identified distinct uses and gratifications associated with consumers' social media usage, encompassing facets such as social interaction, information acquisition, entertainment, and communicatory utilities. Similarly, Guedes and Gosling (2023) have outlined five primary functions typically ascribed to the organizational deployment of social media, including promotion, product distribution, communication, management, and research. Nevertheless, the specific role of social media in addressing crises still needs to be explored, thereby impeding its theoretical development.

According to Boote and Beile (2005), advancing the collective understanding of a subject requires an overview of the existing state of knowledge. Therefore, conducting a

thorough review and synthesis of the literature on social media utilization in crisis-related contexts is imperative to establish robust theoretical groundwork for forthcoming research endeavors.

In light of these considerations, the present study systematically examines the current research landscape on social media crisis communication within the tourism industry. The study aims to accomplish three primary objectives: (i) to compile and assess state-of-the-art growth and development, (ii) to investigate the utilization of social media as a mechanism for coping with crises and their implications for the tourism industry, and (iii) to identify potential avenues for future research.

Therefore, by choosing this aim and method, this study tries to address the literature shortage and assist academics, policymakers, and professionals in understanding the recent progress and the trends that shape the research agenda, developing knowledge and the ability to deal with crises affecting the tourism industry.

2.2. Methodology

This study opted for a systematic literature review (SLR) to map the current knowledge on social media crisis communication in the tourism industry. The methodology allows an objective and organized review of any literature topic (Tranfield et al., 2003) using a rigorous, replicable, scientific, and transparent process (Omerzel, 2016). Therefore, an SLR is a type of research that follows specific protocols to connect a large corpus of documents congruently (Galvão & Ricarte, 2019). To conduct the RSL, the process was divided into five steps (Figure 2.1).

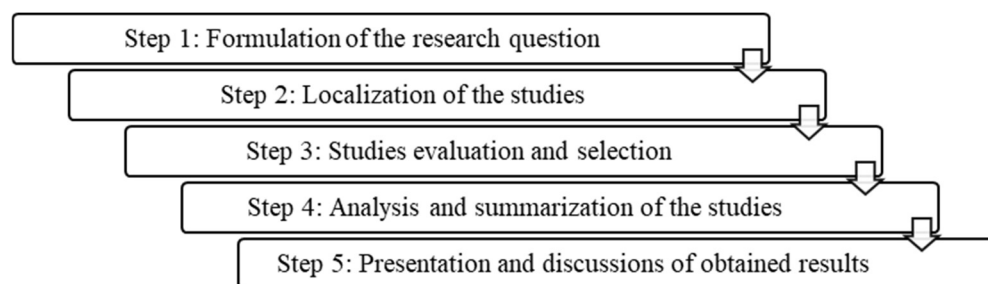


Figure 2.1. Phases of the Systematic Literature Review Process

Source: Adapted from Denyer and Tranfield (2009).

The research questions defined for this study are: 1) How representative is research on social media in the tourism crisis? 2) What topics and subjects are considered in the literature? 3) How has social media been applied to coping with tourism crises?

The study utilized the Scopus® database from Elsevier and the Web of Science™ Core Collection (WoS) to gather scientific studies for analysis. They are acknowledged as the largest and most referenced databases of reviewed scientific literature, covering diverse research topics (Mongeon & Paul-Hus, 2016). The search was conducted on March 3rd, 2023, considering peer-reviewed English articles published in journals up to December 31st, 2022, for a complete comparison between years. There was no timeframe for the literature collection. The search configuration is presented in Table 2.1.

Table 2.1. Search Configuration

Survey Items	Selection Criteria
Search Terms	(touris* or destination or travel) AND (disaster or crisis or hazard) AND ("social media" or "digital platform" or "web 2.0" or "social web" or "electronic communication" or "digital channels")
Survey Date	March 3rd 2023
Period analyzed	Documents published until December 31st, 2022
Database	Scopus and Web of Science (WoS)
Field of research	Article title, Abstract, Keywords
Research Area	Business, Management and Accounting Economics, Econometrics and Finance
Document Type	Article
Language	English
Publication Stage	Final

The search approach, incorporating relevant key terms, facilitated the identification of documents spanning the years 2013 to 2022. This relatively short timeframe is primarily attributed to social media platforms' emergence and rapid evolution in the 2000s. The search initially yielded 134 articles. Upon identification of 30 duplicate documents, they were promptly excluded. Following this, the abstracts of the remaining articles were analyzed to minimize subjectivity in the selection process, excluding 34 documents. As a result, the final database comprised 70 articles (See Appendix A). Figure 2.2 illustrates the search process via a flowchart.

Once the sample had been selected, a content analysis was undertaken to identify and document the most pertinent information. The elements were classified analogously and progressively based on their frequency. In this instance, the categories were not predefined but rather emerged entirely from the context of the unit of analysis, reflecting the recurrence of standard content (Bardin, 1977). This adaptable approach ensured that the analysis was comprehensive and reflective of the evolving nature of the research topic.

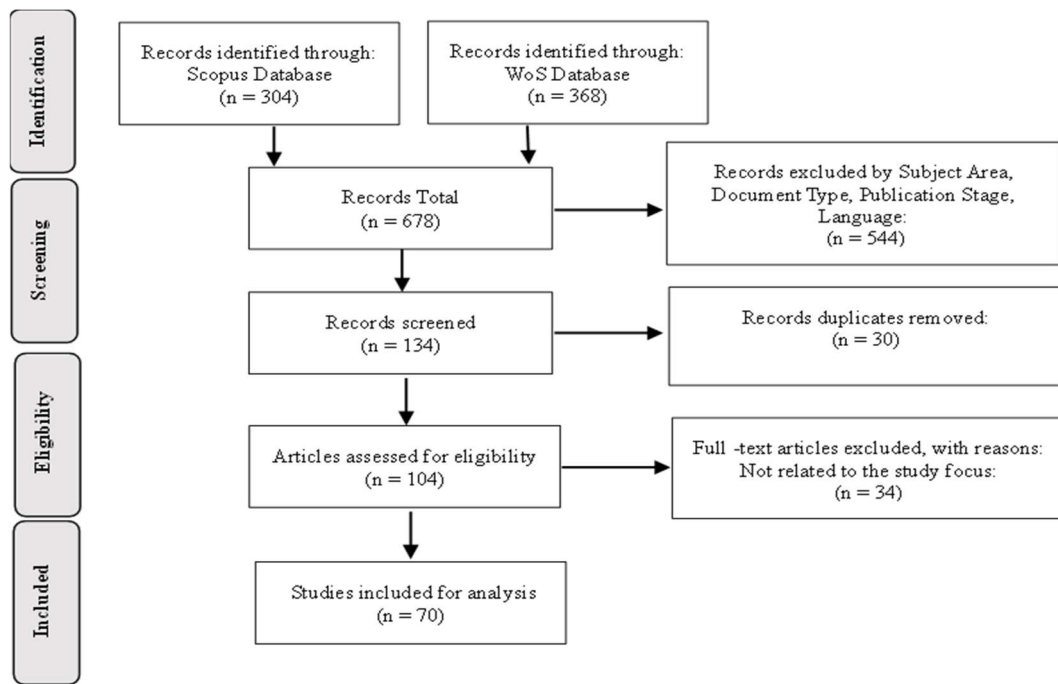


Figure 2.2. The Study Flow Diagram
Source: Adapted from Moher et al. (2009)

Finally, the results were formally detailed in five parts, providing a comprehensive overview of the research findings. The first part presents a descriptive analysis of the documents. The second determines the main topics researched. The third explores the social media mechanisms. The fourth exhibits a conceptual framework for social media implications. Finally, the fifth part proposes a future research agenda.

2.3. Findings

2.3.1. Descriptive Analysis of Scientific Research on Social Media Crisis Communication in the Tourism Industry

Figure 2.3 depicts the publishing trends within the knowledge domain. Notably, there was a significant upsurge in publications in 2022, totaling 23 documents. The period from 2020 to 2022 encompasses the majority, accounting for 62% of the publications. This marked increase can be attributed to research endeavors about the COVID-19 pandemic, which constitute 29 sample articles.

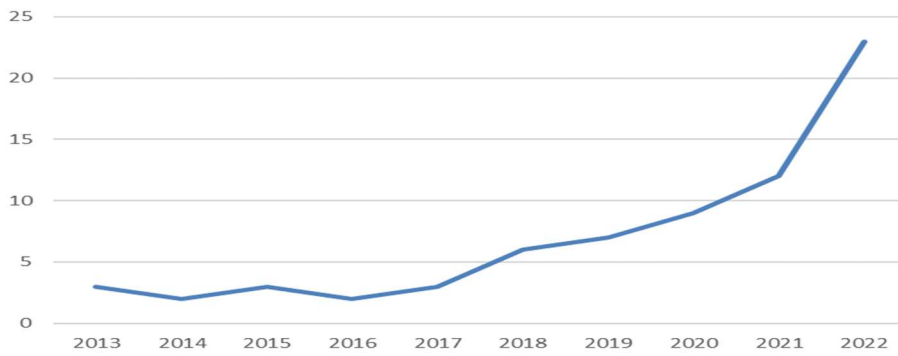


Figure 2.3. Trend in publication by year (2013-2022)

The articles were published in 42 different journals. Most were published in the top-ranking tourism journals, such as *Tourism Management* (13%), *Journal of Destination Marketing and Management* (7%), *Tourism Management Perspectives* (7%), and *Current Issues in Tourism* (6%).

The findings underscore a predominance of empirical studies (99%), striking a balance between qualitative and quantitative methodologies (See Table 2.2). Notably, data sourced from social media platforms was prevalent, accounting for 56% of the sample. Content analysis emerged as the most frequently used analytical method (27%), emphasizing sentiment analysis (14%). It is noteworthy that since 2020, sentiment analysis has garnered increased attention from researchers, leveraging machine learning techniques to comprehend social media users' behavior.

Table 2.2. Research design/methodology

Design/methodology	N. of Articles	%
Research type		
Conceptual	1	1%
Qualitative	27	39%
Quantitative	26	37%
Mixed method (Quantitative + Qualitative)	16	23%
Data collection		
Literature	1	1%
Online observation	39	56%
Questionnaire	16	23%
Mixed method	14	20%
Sample source		
Literature	1	1%
Destination Management Organization (DMO)	11	16%
News media online	4	6%
Residents	2	3%
Social Media User	26	37%
Tourism Supplier	14	20%
Travelers	14	20%
Type of Analysis		
Agent-based modeling (ABM)	1	1%
Analysis of variance (ANOVA)	2	3%
Benchmarking analysis	1	1%
Bibliographic	1	1%
Case Study	2	3%
Content analysis	19	27%
Descriptive statistics	2	3%
Factor analysis	2	3%
Mixed methods	10	14%
Netnography	5	7%
Pearson's chi-square statistical test	1	1%
Qualitative comparative analysis	1	1%
Regression analysis	7	10%
Semantic network analysis	2	3%
Sentiment analysis	10	14%
Social network analysis	2	3%
Structural equations modeling	2	3%

Table 2.3 presents the types of crises and business sectors investigated by the sample. Seven distinct crisis types were identified based on prior literature classification (Coombs, 1999; Duan et al., 2021). Notably, health-related crises emerged as the most prevalent, constituting 47% of the sample, with the COVID-19 crisis emerging as the predominant theme, followed by Natural Disasters at 14%. Regarding travel business sectors, the hospitality industry represents 20% of the sample, focusing predominantly on health and human error crises. Additionally, forty studies were classified under "Destination".

Table 2.3. Types of crises and business sectors

Crisis Type	Crisis Context	Sector	Authors
Financial Crises	Economic Problems	Destination	Gkritzali et al. (2020); Perakakis et al. (2016); Priporas et al. (2020)
		Hospitality	Munteanu et al. (2014)
Health-Related Crises	COVID-19	Destination	Avraham (2021); Azer et al. (2021); Baksi et al. (2022); Balinska & Jaska (2022); Carvache-Franco et al. (2022a); Erragcha & Babay (2022); Femenia-Serra et al. (2022); Joseph & Anandkumar (2021); Lenggogeni et al. (2022); Li & Scott (2020); Nadeau et al. (2022); Pachucki et al. (2022); Pasquinelli et al. (2022); Rather (2021); Roth-Cohen & Lahav (2022); Solazzo et al. (2022); Yang & Wong (2021); Zhang et al. (2022)
		Hospitality	Ingrassia et al. (2022); Li et al. (2022)
		Hospitality	Aguado-Correa et al. (2022); Nilashi et al. (2022); Song et al. (2022)
		Leisure and Entertainment	Zollo et al. (2022)
		Cruise Industry	Chen et al. (2022); Muritala et al. (2022)
		Travel Agencies	Gonzalez et al. (2022)
		Travel Industry	Carvache-Franco et al. (2022b); Obembe et al. (2021)
	Bed Bug Crisis	Hospitality	Liu et al. (2015a); Liu et al. (2015b); Liu-Lastres et al. (2020)
	Zika Virus	Hospitality	Yang et al. (2022)
Human Error	Event	Event	Arlkatti et al. (2022)
	Overcrowding	Event	
	Flight Crash	Airline	Dimitriou & Antoniou (2017)
	Cruise Boat Disaster	Cruise Industry	Xie et al. (2022)
	Attack on a Tourist	Hospitality Destination	Zhai et al. (2019) Su et al. (2019)
Natural Disasters	Bushfires		Schweinsberg et al. (2020); Willson et al. (2021)
	Earthquake	Destination	Fukui & Ohe (2020); Ketter (2016); Yan et al. (2020)
	Flood		Wang et al. (2019)
	Cyclone	Hospitality Medical Tourism	Möller et al. (2018) Mason et al. (2019)
	Hurricane	Leisure and Entertainment	Park et al. (2019)
	Volcanic Eruption	Airline	Hvass (2013)
Political Events	Occupy Central Protests	Destination	Luo & Zhai (2017); Tolkach (2018); Zhai & Luo (2018).
		Hospitality	Qiu et al. (2021)
Reputation Crises	Critical Events	Destination	Avraham & Ketter (2017); Zhai et al. (2020)
		Hospitality	Barbe & Pennington-Gray (2018).
		Cruise industry	Penco et al. (2019)
Terrorism	Terrorist Attack	Destination	Barbe et al. (2018); Oliveira & Huertas (2019); Filieri et al. (2021)
Others	Environmental Crises	Airline	Becken et al. (2021)
	Shark Attacks	Event	Morgan et al. (2021)
	Crisis Possibility	Destination	Pennington-Gray & Schroeder (2013); Schroeder & Pennington-Gray (2015); Schroeder et al. (2013); Schroeder et al. (2018)
	During the Trip	Event	Schroeder & Pennington-Gray (2014)

Asia and Europe were the most studied regions, 30% each, followed by the Americas, 17% (Table 2.4). In Asia, the studies are concentrated in China (11), mostly related to the Occupy Central protests in Hong Kong that occurred in 2014 and Covid-19, with four

studies each. In America, meanwhile, the majority had the United States of America (USA) as their study site, with 10 articles. The studies in Europe were more distributed, with Italy (5), the United Kingdom (UK) (4), Greece (3), and Spain (3); other countries presented one study each. Australia is the highlight in Oceania, with three articles, two of which are about the devastating forest fires in 2019-2020. The African continent contains two studies, one on the reputational crisis in Sub-Saharan African (SSA) countries and another on the COVID-19 pandemic in Tunisia. Avraham (2021) and Carvache-Franco et al. (2022b) developed their studies considering regions from several continents. Other eight articles (Azer et al., 2021; Baksi et al., 2022; Becken et al., 2021; Carvache-Franco et al., 2022a; Dimitriou & Antoniou, 2017; Femenia-Serra et al., 2022; Muritala et al., 2022; Nilashi et al., 2022) do not present information about the research location.

Table 2.4. Study location

Continent	N. of Articles	%
Africa	2	3%
America	12	17%
Asia	21	30%
Europe	21	30%
Oceania	4	6%
Global	2	3%
Não informado	8	11%
Total	70	100%

Furthermore, this review identified the predominant social media platforms considered by the sample (Figure 2.4). Twitter is the most studied platform, representing 38% of the sample, followed by Facebook (25%) and Instagram (13%).

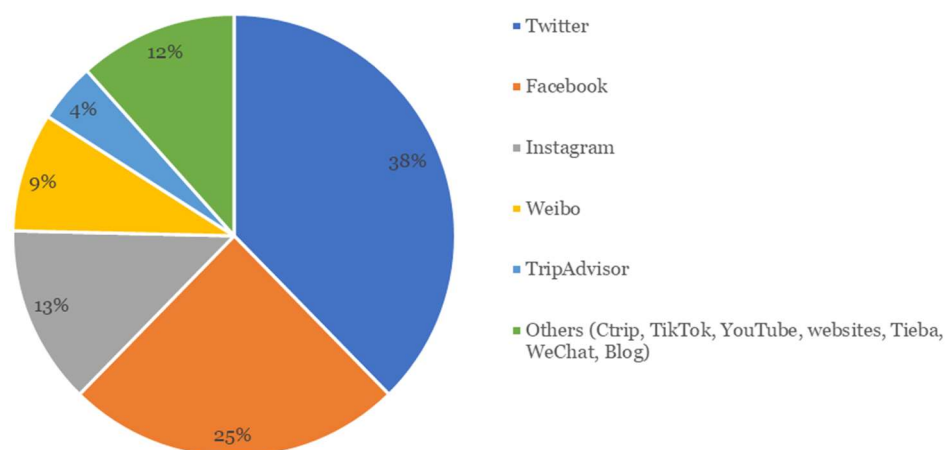


Figure 2.4. Social media platforms

These platforms boast significant digital audiences and substantial organizational participation yet vary widely regarding services, reach, and utilization patterns. Twitter

and Facebook stand out as particularly popular among crisis communication academics due to the prevalence of textual and narrative content, coupled with the accessibility of data (Obembe et al., 2021). Notably, Instagram has garnered increased attention since 2021. This platform combines the evocative potential of photographs with concise textual content, thereby reinforcing destination imagery and influencing public emotions (Fileri et al., 2021; Pasquinelli et al., 2022).

2.3.2 Overview of the Research Topics

The research topics on social media crisis communication in the tourism industry encompass both organizational and consumer perspectives, as outlined in Tables 2.5 and 2.6. From an organizational standpoint, four main clusters were identified: Destination Management Organizations (DMOs) crisis response, travel businesses' crisis response, social media influencer communication, and market management and monitoring. Conversely, primary themes investigated from a consumer perspective include drivers for social media use, effects of social media users' engagement, users' risk perception, users' decision-making, and resilience and adaptability.

Table 2.5. Organizational research perspectives summary

Cluster	Related Paper	Main Findings	Crisis type
Crisis management	Liu et al. (2015b)	Explored how social media is utilized in the hotel industry across various stages of crisis management: risk reduction, readiness, response, and recovery.	Bed bug crisis
	Ketter (2016)	Describe Facebook as a multifunctional tool to restore a destination's image after a natural disaster.	Earthquake
	Perakakis et al. (2016)	Presented social media as a tool for the promotion of tourism destinations and photography for image projection.	Economic crisis
	Avraham & Ketter (2017)	Showcased the social media use to promote a positive image or reshape the troubled narrative while managing negative messages from traditional media.	Natural disasters, violent conflicts, terror attacks, and epidemics
DMOs' crisis response	Barbe et al. (2018)	Revealed the predominantly reactive stance, providing safety guidance to tourists, portraying themselves as victims, and prioritizing promotional content.	Terrorist Attack
	Oliveira & Huertas (2019)	Identified the social media use mostly managing the terrorist attacks' impacts, with event information and stakeholder support, and fewer promotional messages.	Terrorist Attack
	Fukui & Ohe (2020)	Discovered that tourism resource posts appeal more to regular tourists, while volunteer tourists prefer information regarding rehabilitation/reconstruction.	Earthquake and tsunami
	Avraham (2021)	Provides a new theoretical framework that divides image repair strategies into pandemic phases (pre-lockdown, lockdown, and post-lockdown).	COVID-19
	Joseph & Anandkumar (2021)	Revealed similar communication on social media platforms, predominating non-COVID-19 messages focusing on nature and adventure themes.	COVID-19
	Pachucki et al. (2022)	It presented the linguistic text features changes in DMOs' social media communication and an increase in consumers' social media engagement.	COVID-19

	Pasquinelli et al. (2022)	Identified a heightened communication of the destination's brand values on social media during the pandemic, accompanied by a shift in brand attributes.	COVID-19
	Hvass (2013)	Presented the airline companies' social media use for technical and emotional information, traditional media complement, and customer support.	Volcanic eruption
	Munteanu et al. (2014)	Highlighted the widespread utilization of hotels' social media to enhance their online image and advertise their offerings, avoiding crisis-related messaging.	Economic crisis
	Barbe & Pennington-Gray (2018)	Observed that hotels avoided instructional information, instead opting for a bolstering strategy that portrayed them as victims.	Alligator snatching, mass shooting, and Zika virus
	Möller et al. (2018)	Unveiled that social media was crucial in soliciting funds and donations during natural disaster recovery.	Cyclone
	Mason et al. (2019)	Showed that destination attribute promotion and unrelated health-oriented content predominated during a natural disaster.	Hurricane
Travel business's crisis response	Liu-Lastres et al. (2020)	Identified that hotels predominantly utilized enhancing and bolstering strategies in their communications, with instructional information rarely included.	Bed bug crisis
	Gonzalez et al. (2021)	Demonstrated the intensification of online travel agencies' social media communication, adaptation of content, and implementation of innovative strategies during the pandemic.	COVID-19
	Aguado-Correa et al. (2022)	Described a shift in hotels' messaging, characterized by a rise in emotional content, resulting in a reasonable user engagement rate.	COVID-19
	Carvache-Franco et al. (2022b)	Identified that rebuilding crisis response strategies predominated in travel businesses and non-governmental organizations during COVID-19.	COVID-19
	Li et al. (2022)	Presented the hospitality industry's innovative response strategies, high-quality arguments, and assertive language on social media to bolster positive emotions.	COVID-19
	Zollo et al. (2022)	Presented social media marketing activities as strategic tools to enhance loyalty and boost economic support for museums.	COVID-19
Social media influencer communication	Femenia-Serra et al. (2022)	Elucidated the social media influencers' significance in recovering destination image during the pandemic, outlining their business strategies.	COVID-19
	Ingrassia et al. (2022)	Described how the social media influencer potentializes the brand's value on social media during COVID-19 and their persuasive and managerial skills.	COVID-19
	Dimitriou & Antoniou (2017)	Demonstrated social media use to monitor the characteristics and behaviors of potential consumers and conduct market analyses for airlines during crises.	Flight crash
	Schroeder et al. (2018)	Classified emerging sources of risk for tourism destinations and monitored the types of risk mentioned in the news media's tweets, highlighting geopolitics.	-
Market management and monitoring	Qiu et al. (2021)	Revealed that hashtag frequency analysis offers valuable insights into changes in demand during a crisis.	Political Protests
	Carvache-Franco et al. (2022a)	The main subjects and destinations concerning COVID-19 were pinpointed by analyzing Twitter hashtags associated with coastal and maritime tourism.	COVID-19
	Muritala et al. (2022)	Identified critics based on perceptions and stereotypes of the cruise industry before the pandemic and the need for more sustainable business models.	COVID-19
	Solazzo et al. (2022)	Monitored public debates on social media to identify the main topics discussed during COVID-19 and the users' concerns.	COVID-19

Table 2.6. Consumer research perspectives summary

Cluster	Related Paper	Main Findings	Crisis type
Drivers for social media use	Pennington-Gray & Schroeder (2013)	Identified that travelers in the high perceived risk group are more inclined to resort to social media for information when traveling during crises.	-
	Schroeder et al. (2013)	Revealed that risk perceptions and smartphone use in past travel are drivers of using social media during crises.	-
	Schroeder & Pennington-Gray (2015)	Identified the nationality, age group, travel previous experience, and risk perceptions affect the likelihood of using social media to seek information during a crisis.	-
	Arlikatti et al. (2022)	Identified patterns of internet use differ according to demographic characteristics such as age, language, and income.	Event overcrowding
	Balinska & Jaska (2022)	Revealed that Generation Z utilized social media during the pandemic to search for tourist products while avoiding online contact with tour operators.	COVID-19
Social media users' engagement effects	Liu et al. (2015b)	Observing the guest's experience directly affected by the crisis tends to express strong negative outcomes and emotional responses.	Bed bug crisis
	Luo & Zhai (2017)	It showed that social media users' discussion topics changed from political events to tourism boycotts as emotions became increasingly negative.	Political Protests
	Tolkach (2018)	Discussed the impracticality of utilizing social media data to research secondary crises due to Internet censorship in China.	Political Protests
	Zhai & Luo (2018)	Argued for using social media data to elucidate the transition from discussing a specific event to advocating for a tourism boycott.	Political Protests
	Su et al. (2019)	Observed that third-party communications, temporal dimension, location, and crisis event personal proximity to influence social media users' behavior.	Attack on a woman tourist
	Zhai et al. (2019)	Revealed the secondary crisis communication evolution on social media, highlighting a tipping point characterized by negative emotional outbursts.	Attack on a woman tourist
	Gkritzali et al. (2020)	Identified a significant co-destruction potential of tourist destinations' social media value through the EWOM generated by influential microblog users.	Economic crisis
	Priporas et al. (2020)	Revealed the significant impact of city image and brand personality on Generation Z residents' social media engagement.	Economic crisis
	Schweinsberg et al. (2020)	Explored the social media's ability to subvert the topics discussed by users, thereby impacting crisis response strategies.	Bushfires
	Yang & Wong (2021)	Observed that users' active engagement with social media is a distraction mechanism that buffers the negative psychological pandemic effects.	COVID-19
	Zhai et al. (2020)	Revealed that group relative deprivation elicits audiences' destination anger and distrust, leading to online collective action and negative travel intentions.	Reputation crisis
	Azer et al. (2021)	Identified nine categories and six factors influencing social media users' conduct during the pandemic.	COVID-19
	Becken et al. (2021)	Demonstrated the emotional language used by social media users to influence other users' behavior.	Climate crisis
	Filieri et al. (2021)	Identified that social media users express their brand love in crisis, providing destination emotional support and co-creating emotional capital.	Terrorist attack
	Morgan et al. (2021)	Examined the UGC influence and co-branding throughout the crisis cycle, with a negative sentiment more associated with the destination than the event.	Shark attacks
Willson et al. (2021)	Exposed social media's role in subverting discussions ranging from bushfires to the global climate emergency and the threat to the tourism industry.	Bushfires	
Xie et al. (2022)	Revealed that online negative information produced changes in public opinion, aggravating the negative image of the destination and travel intentions.	Cruise boat disaster	

User's risk perception	Schroeder & Pennington-Gray (2014)	Observed that exposure to traditional and social media information affects risk perceptions of destinations hosting Mega Events.	-
	Li & Scott (2020)	Revealed the intensification of social media's spread of misinformation during COVID-19, which impacted the channel's trust reduction.	COVID-19
	Yan et al. (2020)	Observed that people's sentiments vary over time, becoming less negative about the destination.	Earthquakes
	Obembe et al. (2021)	Describe how institutional actors shape public narrative and stakeholder crisis responses significantly.	COVID-19
	Nadeau et al. (2022)	Explored the emotion projection during COVID-19, finding destinations' image resilience despite the significant increase in fear projection.	COVID-19
User's decision-making	Yang et al. (2021)	Observed that online public health institutions' messages significantly affected peer-to-peer accommodation bookings and the average daily rate in a crisis.	Zika virus
	Park et al. (2019)	Outlined strategies for engaging and leveraging opinion leaders in marketing and crisis communications tactics to influence tourists' decision-making.	Hurricane
	Baksi et al. (2022)	Demonstrate a high degree of centrality on social media, where a few individuals play a pivotal role in users' decision-making.	COVID-19
	Roth-Cohen & Lahav (2022)	Revealed the social media group's role during a crisis to members' solidarity, sharing information and emotions, and promoting products.	COVID-19
	Penco et al. (2019)	Identified that crisis-related information dissemination on social media did not sway customers' intent to cruise. However, their emotions and perceptions of corporate reputation have affected their decision-making.	Reputation crisis
	Erragcha & Babay (2022)	Demonstrated that social media positively impacts visit intention, mediated by factors such as traveler satisfaction, commitment to destinations, and the co-created value surrounding the travel experience.	COVID-19
	Rather (2021)	Observed that social media positively and significantly affects customer brand engagement, co-creation, and revisit intention in COVID-19 times.	COVID-19
	Wang et al. (2019)	Found that social media engagement positively moderates the relationship between emotions, disaster familiarity, and visit and recommendation intentions.	Flood
Resilience and adaptability	Nilashi et al. (2022)	Analyzing electronic reviews during the pandemic depicted the correlation between hotels' service quality and customer satisfaction.	COVID-19
	Song et al. (2022)	Identified that service quality was the primary factor influencing hotel customer satisfaction during the pandemic.	COVID-19
	Chen et al. (2022)	Observed the tourists' resilience under extreme circumstances and the supportive attitude toward tourist industry players.	COVID-19
	Lenggogeni et al. (2022)	Revealed shifts in emotions throughout different stages of the pandemic, highlighting humor as a coping mechanism during the crisis, particularly via social media platforms.	COVID-19
	Zhang et al. (2022)	Showcased a positive adaptive travel behavior strongly influenced by perceived risk, support from others, the effectiveness of social media information, and travel intention.	COVID-19

Despite the breadth of topics covered, the focal point of research in the knowledge domain predominantly revolves around organizations' crisis response strategies and consumer social media engagement. The literature examines how DMOs and travel business practitioners utilize social media platforms to address crises. Coombs's (1999) Situational Crisis Communication Theory (SCCT) serves as a foundational theoretical

framework for several authors in this field (Barbe & Pennington-Gray, 2018; Barbe et al., 2018; Hvass, 2013; Liu-Lastres et al., 2020; Oliveira & Huertas, 2019). Conversely, a significant portion of studies concentrate on analyzing online public discourse, particularly user-generated content (UGC) and electronic word-of-mouth' (E-WOM) impacts in the tourism industry. Scholars delve into social media's capacity to redirect attention away from the original topic (Morgan et al., 2021; Schweinsberg et al., 2020; Willson et al., 2021) and potentially precipitate secondary crises (Luo & Zhai, 2017; Zhai et al., 2019; Zhai et al., 2020).

The COVID-19 pandemic has emerged as the central theme in crisis communication, catalyzing significant transformations within the tourism industry. Alongside this overarching theme, several subjects have garnered considerable attention, including exploring emotional content communication, developing and implementing innovative strategies to address crises, the role of social media influencers as strategic communicators, and examining organizational resilience and adaptability amidst crises.

Findings suggest a discernible shift from reactive and ad hoc crisis response strategies towards more innovative approaches (Li et al., 2022; Muritala et al., 2022; Pasquinelli et al., 2022; Zollo et al., 2022) and emotionally resonant messaging (Aguado-Correa et al., 2022; Gonzalez et al., 2021; Pachucki et al., 2022). Social media influencers have been identified as strategic communicators crucial for destinations and travel businesses' image recovery post-crisis, given their influence over others' actions and decisions (Femenia-Serra et al., 2022; Ingrassia et al., 2022). Moreover, social media has played a pivotal role in fostering resilience and adaptability among individuals during the lockdown period, thereby influencing tourists' behavior in response to crises (Chen et al., 2022; Lenggogeni et al., 2022; Zhang et al., 2022). These insights underscore the evolving nature of crisis communication in tourism and emphasize the importance of effectively leveraging social media to navigate unprecedented challenges such as the COVID-19 pandemic.

2.3.3. Social Media's Mechanism in the Crisis Context

The content analysis reveals the varied roles that social media fulfills for both organizations and consumers within a crisis context. Through an examination of the literature, the utilization of social media emerges as a discernible mechanism for navigating crises across various stages. This analysis delineates seven overarching directions: information dissemination, promotional activities, emotional engagement, persuasive communication, distraction tactics, analytical insights, and innovation initiatives.

2.3.3.1. Information Mechanism

The information mechanism refers to organizations' and consumers' use of social media to provide and seek instruction in coping with a crisis.

The literature illustrates organizations' utilization of social media platforms to disseminate guidance and adjust information directed to stakeholders. For instance, Ketter (2016) documented that during natural disasters, DMOs employed Facebook as a channel to convey technical information, disseminate press releases, and share hyperlinks to news articles. Similarly, Oliveira and Huertas (2019) observed that DMOs concentrated their communication efforts on managing the aftermath of a terrorist attack, furnishing information about the incident, and expressing solidarity with stakeholders. Furthermore, Mason et al. (2019) highlighted that medical tourism providers predominantly broadcast operational messages, such as opening hours updates and service availability alterations. Some of them circulated instructional messages during the preparatory phase, advising on actions to be taken before, during, and after a hurricane.

Contrarily, Aguado-Correa et al. (2022) highlight a deficiency in communicating safety and health measures concerning the COVID-19 pandemic within the hostels on social media. Organizations have shifted responsibility for disseminating instructional information to official government websites. Barbe and Pennington-Gray (2018) suggest that this tendency might stem from businesses' perception that there is no necessity for instructional communication or that such communication could potentially heighten tourists' perception of risk.

Consumers have leveraged social media platforms to disseminate information among other stakeholders and organizations, offering individualized status updates regarding the crisis based on personal experiences (Azer et al., 2021). Furthermore, they utilize these media channels to remain informed during times of crisis, staying abreast of unfolding events and taking measures to safeguard themselves (Pennington-Gray & Schroeder, 2013; Schroeder et al., 2013; Schroeder & Pennington-Gray, 2015).

Social media also complements traditional news media, offering an open and real-time communication platform that potentially furnishes additional information unavailable in other media sources (Ketter, 2016; Möller et al., 2018; Perakakis et al., 2016). Furthermore, it enables organizations to directly engage with the public and rectify misperceptions (Avraham & Ketter, 2017; Ketter, 2016).

Meanwhile, Li and Scott (2020) underscore the proliferation of misinformation on social media during the COVID-19 pandemic, which can lead to adverse outcomes such as increased fear and diminished confidence in these channels. Moreover, Yang et al. (2021) point out that information received from various sources contributes to heightened risk perception, thereby distinctly influencing users' decisions during a crisis. Hence, ensuring the reliability of the disseminated information is crucial for safeguarding tourists during a crisis, facilitating their continual updating, and mitigating their risk perception (Zhai et al., 2019).

2.3.3.2. Promotion Mechanism

The promotion mechanism refers to organizations using social media to promote their products/services/brands for coping with a crisis.

This review delineates that destinations and travel businesses predominantly utilize social media for marketing promotion, employing it as a strategy for image recovery. Perakakis et al. (2016) assert that social media platforms are increasingly recognized for their cost-effectiveness as marketing tools, offering significant returns compared to costly traditional promotional.

The literature illustrates that DMOs have employed social media aiming to minimize negative repercussions by promoting destination attributes, such as attractions, spaces, experiences, events, cultures, economy, and safety (Barbe et al., 2018; Ketter, 2016; Oliveira & Huertas, 2019). Avraham and Ketter (2017) delineate that Sub-Saharan African countries employed social media predominantly for destination promotion, either to project a positive image while overlooking the crisis or to acknowledge the negative image while endeavoring to transform the country's perception from a problematic past to a promising future. As per the literature (Avraham, 2021; Barbe et al., 2018; Joseph & Anandkumar, 2021; Ketter, 2016), DMOs primarily focus on promoting the safety of destinations and endeavoring to convince consumers that they are secure and suitable for visitation. This strategic approach is posited to mitigate adverse consequences from events impacting the destination (Barbe et al., 2018). Throughout the COVID-19 pandemic, destinations maintained or even intensified their image projection efforts, leveraging social media to brand promotion, market positioning, and influence travelers' decisions (Joseph & Anandkumar, 2021; Pachucki et al., 2022; Pasquinelli et al., 2022).

This mechanism encompasses promoting products, establishments, and tourist destinations in the hospitality realm. Möller et al. (2018) highlighted that during the recovery phase, the hotels' social media posts focused on campaigns and events related to the natural disaster, alongside special accommodation and travel offers. Conversely, Aguado-Correa et al. (2022) observed that amid the COVID-19 pandemic, lowering tariffs as a competitive strategy was eschewed to emphasize personalization and service differentiation. This was primarily manifested through promoting health and safety measures, such as adopting COVID-19 hygiene certificates.

The literature underscores the significance of marketing and promotional efforts to help tourist destinations recover following a crisis. Marketing messages can be tailored to achieve various objectives, including rectifying misconceptions, mitigating the impact of a disaster, or dissociating the destination's image from the affected area (Avraham & Ketter, 2017; Barbe & Pennington-Gray, 2018; Liu-Lastres et al., 2020). Moreover, promotional content plays a crucial role in reinstating confidence in a destination and upholding a positive brand image in the marketplace (Oliveira & Huertas, 2019; Pasquinelli et al., 2022). However, an excessive focus on marketing content may convey the perception that organizations are detached from reality and distant from stakeholders (Aguado-Correa et al., 2022; Pachucki et al., 2022).

2.3.3.3. Emotion Mechanism

The emotion mechanism refers to consumers' and organizations' use of social media to help other actors cope with a crisis.

This mechanism garnered significant attention during COVID-19. The pandemic required a recalibration of content strategies to elicit favorable consumer responses, including a reduction in overtly marketing-centric communications on the company's products and a heightened emphasis on emotionally resonant messaging. Aguado-Correa et al. (2022) report that the hotels posted mostly emotional content, such as a sense of community and social actions, during the lockdown. Nadeau et al. (2022) elucidate that emotion projection serves as a valuable lens for assessing the resilience of destination image amid crises, as evidenced by their comparative analysis of the impacts of distinct policy interventions employed during the pandemic in Toronto and New York.

Amidst the COVID-19 lockdowns, organizations conscientiously fortified their social media engagement efforts to uphold emotional connections with online communities (Gonzalez et al., 2021; Li et al., 2022). Marketing practitioners transitioned

communication content from instructional and promotional material towards emotionally resonant content and consumer support. Despite the inability to convey core business messages, organizations persisted in showcasing brand presence by disseminating messages of hope (Pachucki et al., 2022).

Shifts in content preferences among social media users have been discerned through their positive engagement with emotional posts (Gonzalez et al., 2021). Pachucki et al. (2022) contend that consumers no longer appreciate specific product promotion content, perceiving it as incongruent with the uncertainties engendered by volatile circumstances in the crisis. Moreover, the literature underscores social media's evolution as a conduit for emotional support, facilitating the exchange of experiences, expressions of empathy, and manifestations of solidarity among individuals and entities in crisis times (Azer et al., 2021; Hvass, 2013).

2.3.3.4. Persuasion Mechanism

The persuasion mechanism refers to consumers' and organizations' use of social media to influence others' actions in coping with a crisis.

The literature (e.g., Schweinsberg et al., 2020; Xie et al., 2022; Zhang et al., 2022) underscores the pivotal role of social media in manipulating tourists' attitudes and behaviors during a crisis. It can serve as a conduit for disseminating misinformation, fear, panic, and sensationalism (Li & Scott, 2020). Conversely, Zhang et al. (2022) elucidate that disseminating accurate information via social media and psychological support during the pandemic significantly influenced tourists' behavior. Such efforts contributed to fostering a secure and stable environment, thereby bolstering public confidence in travel.

Social media emerges as a potent mechanism for persuasion, facilitating the dissemination of critical information (Luo & Zhai, 2017; Schweinsberg et al., 2020; Su et al., 2019; Yan et al., 2020;) and shaping public opinion (Baksi et al., 2022; Li & Scott, 2020; Muritala et al., 2022; Nadeau et al., 2022; Obembe et al., 2021; Roth-Cohen & Lahav, 2022). Schweinsberg et al. (2020) accentuate social media's propensity to divert discussions from their original focus, suggesting the potential obfuscation of the necessity for more tailored crisis response strategies. Furthermore, social media users actively engage in the generation and dissemination of information, exerting a pivotal role in brand co-creation or co-destruction. This platform can accelerate and magnify

information dissemination (Zhai et al., 2019) or exacerbate crisis situations (Becken et al., 2021; Morgan et al., 2021; Willson et al., 2021).

Conversely, social media platforms harbor the potential to galvanize resources and aid. For instance, Möller et al. (2018) found that hotels mainly utilized social media to solicit funds and donations during recovery after a natural disaster in Fiji. Fukui and Ohe (2020) observed that these platforms wield the capacity to attract volunteer tourists, particularly through posts about rehabilitation/reconstruction efforts and volunteer opportunities.

2.3.3.5. Distraction Mechanism

The distraction mechanism refers to consumers' use of social media to support mental health initiatives for coping with a crisis.

Social media's role as a distraction mechanism has predominantly surfaced in literature examining the COVID-19 pandemic. It is posited that such distraction may alleviate the deleterious psychological ramifications engendered by the crisis while concurrently fostering relationships within the external environment (Azer et al., 2021; Zhang et al., 2022).

Scholars affirm a notable degree of resilience exhibited during the pandemic times and underscore the pivotal role of social media in fostering people's adaptability (Chen et al., 2022; Lenggogeni et al., 2022; Zhang et al., 2022; Yang & Wong, 202). Azer et al. (2021) elucidate that social media served as a means for users to seek refuge from the harsh realities of the global crisis. Their investigation identified various facets of escapism, including "escaping the frustrating reality of the pandemic" and "engaging electronically with other social actors."

Consumers utilize social media primarily for social interaction. Chen et al. (2022) observed that during a cruise lockdown, individuals actively engaged with social media platforms to communicate with the outside world, expressing their concerns and emotional responses while seeking updates. Their investigation delineated two forms of social interaction with external stakeholders: media exposure, broadcasting onboard experiences, and seeking outside support, including maintaining connections with family and friends.

In addition to social interaction, consumers turned to social media as entertainment during the lockdown period. According to Azer et al. (2021), recent market research

indicates a global increase in online gaming activity during the COVID-19 crisis. Social media users tended to engage in gaming-related behavior, including sharing crosswords and puzzles.

An intriguing discovery was using humor on social media as a distraction during the lockdown period. Messages were crafted with the intention of eliciting amusement, with a focus on inducing laughter among recipients as a form of relief amidst the crisis (Lenggogeni et al., 2022). Azer et al. (2021) corroborate these findings, demonstrating that social media users frequently sought and depended on the platform for humorous content and levity.

Moreover, Azer et al.'s (2021) study uncovered that social media users' engagement during the global crisis was centered on supporting others to alleviate distress. This is manifested through various actions such as sharing posts containing relaxation tips and leisure activities, providing strategies for working from home, keeping their peers informed, and applauding the commendable behaviors of other stakeholders, including governments, organizations, and citizens.

2.3.3.6. Analytics Mechanism

The analytics mechanism refers to organizations that use social media to gather valuable data and insights to cope with a crisis.

The literature elucidated companies' utilization of social media platforms as an analytical mechanism. The findings underscored the multifaceted application of social media during periods of crisis or market volatility, such as demand forecasting (Qiu et al., 2021), consumers' characteristics and behaviors exploration (Dimitriou & Antoniou, 2017), and evaluation of service quality and traveler satisfaction (Nilashi et al., 2022; Song et al., 2022). The acquired data is then employed to forecast consumer behavior, delineate demographic profiles, and unearth consumption patterns to inform entrepreneurial decision-making processes. Through vigilant monitoring of social media communities, organizations can gain insights into group dynamics and opinions (Roth-Cohen & Lahav, 2022), as well as conduct sentiment analysis at a collective level (Nadeau et al., 2022). In this context, social media functions as an indispensable tool for business intelligence and analytics purposes.

In addition, social media plays a pivotal role in continuously monitoring the reputations of destinations, companies, products, and brands. Scholarly literature (Carvache-Franco et al., 2022a; Muritala et al., 2022; Solazzo et al., 2022) has discerned pertinent topics

of interest by employing Natural Language Processing (NLP) techniques to analyze users' tweets. This corpus of data holds the potential to enable businesses to refine their communication strategies, innovate post-crisis product offerings, and prioritize organizational learning endeavors. For instance, Muritala et al. (2022) elucidate how pre-pandemic perceptions and stereotypes shaped the cruise industry, thereby emphasizing the imperative for novel business paradigms.

Finally, social media serves as a valuable tool for identifying perceived risks (Carvache-Franco et al., 2022b; Schroeder et al., 2018). Schroeder et al. (2018) delineate various potential travel risks gleaned from monitoring social media posts, encompassing categories such as international relations, internal affairs, and other pertinent factors. Within the context of crises, monitoring risk perception and emotional responses aids in elucidating the influential determinants that shape organizational responses, thereby informing crisis communication strategies and facilitating risk mitigation efforts.

2.3.3.7. Innovation Mechanism

The innovation mechanism refers to organizations using social media to display different products/services/practices for coping with a crisis.

The articles present social media as an instrument for communicating innovative services (Zollo et al., 2022), remodeling products (Pasquinelli et al., 2022), new forms of collaboration (Aguado-Correa et al., 2022; Filieri et al., 2021), renewing business models (Chen et al., 2022; Joseph & Anandkumar, 2021; Li et al., 2022; Muritala et al., 2022), and new forms to communicate (Femenia-Serra et al., 2022; Ingrassia et al., 2022).

Innovative actions may enable public engagement on social media when attracting their attention. For example, Zollo et al. (2022) present a museum's virtual experiences adapted during the COVID-19 pandemic and reveal public acceptance and engagement. According to Li et al. (2022), innovative crisis management strategies, such as adopting new technologies, can positively influence consumers' emotions.

Moreover, within the literature, social media influencers emerge as a novel and strategic element during the COVID-19 pandemic (Femenia-Serra et al., 2022; Ingrassia et al., 2022). These influencers have significantly transformed communication dynamics, fostering connections and enhancing engagement with travelers, creating pivotal marketing opportunities for tourism organizations. As highlighted by Femenia-Serra et al. (2022), social media influencers wield considerable influence over E-WoM, serving as a viable strategy for small companies seeking to augment their brand awareness and

visibility. Furthermore, influencers play a pivotal role in travelers' risk perception mitigation and reinstating their confidence.

2.4. Social Media Implications Conceptual Framework During a Crisis in the Tourism Sector

Examining social media usage during a tourism crisis reveals distinct emphases from organizational and consumer standpoints. Nonetheless, the manner in which each actor employs this tool carries ramifications for the behavior of the other (Sigala, 2011). This study uncovers seven mechanisms through which social media operates within a crisis context in the tourism industry. These modes are not mutually exclusive; they complement and mutually reinforce each other. The figure below delineates the operation and outcomes of social media mechanisms.

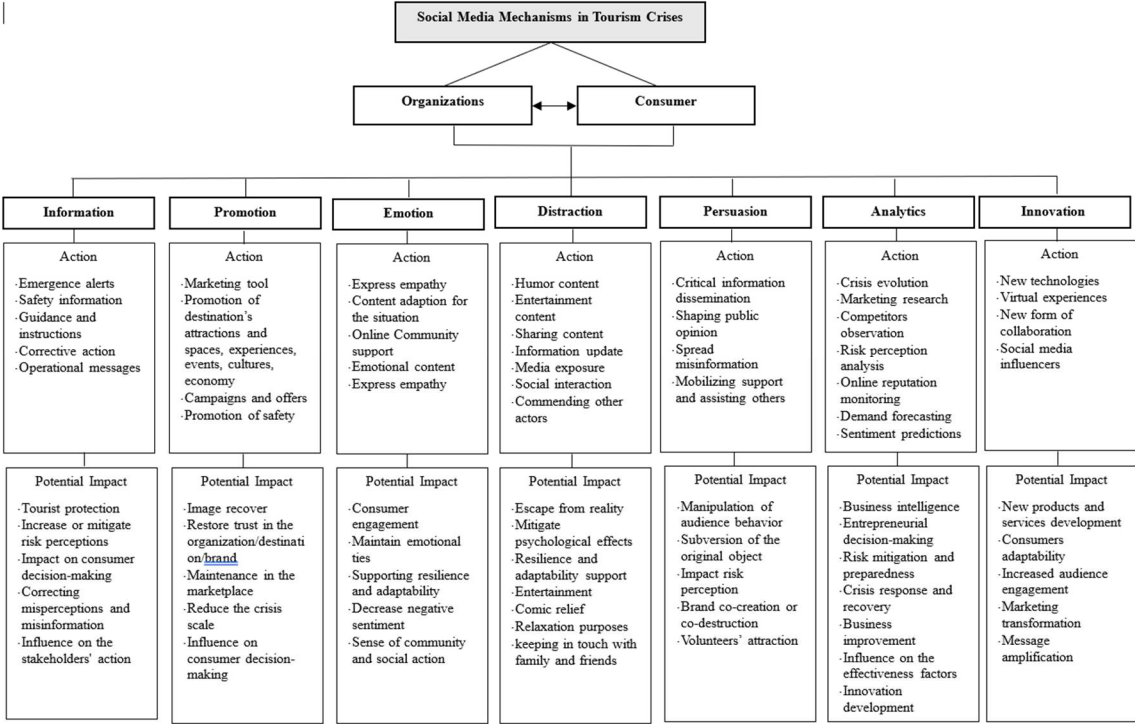


Figure 2.5. Social media implications conceptual framework

Tourism organizations traditionally utilize social media as an information and promotion mechanism during crises. These mechanisms are essential to keep tourists informed and interested in revisiting the destination (Sigala, 2020). Organizations may have delivered the information to share essential updates, emergency alerts, instructions, and safety information before and during crises to mitigate risk perceptions and protect tourists (Xie & Morrison, 2021).

Conversely, social media serves as a potent marketing tool during and after crises, facilitating the restoration of the reputations of travel businesses and destinations. Marketing efforts are instrumental in ensuring the continued visibility of services and products, thereby influencing travelers' decision-making processes. The paramount message may sometimes revolve around assuring travelers of the destination's safety (Avraham, 2021; Joseph & Anandkumar, 2021).

However, the advent of COVID-19 pandemic restrictions necessitated a redefined role for social media in crisis management. The emotions of social media users have become central to all communication strategies. This aligns with findings by Huertas et al. (2020), which suggest that social media serves as a platform for emotional support, offering individuals and organizations a channel to share experiences, convey empathy, and extend solidarity amidst crises. These emotional messages wield considerable influence over the public's response and enhance receptivity to communication efforts (Pachucki et al., 2022). It is essential to maintain emotional ties and increase consumer engagement.

Organizations can also provide public distraction through social media, proposing activities to be pursued during a crisis as alternative experiences (Huertas et al., 2020). However, the function of social media as a distraction mechanism primarily falls within the purview of consumers seeking solace from reality, utilizing technology for entertainment, content sharing, information updates, and social interaction. The duration spent on social media for distraction can significantly impact the audience's emotional state.

Innovation mechanisms assume heightened importance during crises, particularly protracted ones like the COVID-19 pandemic, necessitating organizational adaptation of products and reimagining of business models (Chen et al., 2022; Li et al., 2022; Muritala et al., 2022). Innovations leveraging technologies such as artificial intelligence and virtual reality can be harnessed through social media platforms, facilitating the promotion of virtual experiences and tours (Liu-Lastres, 2022). This represents a novel approach to maintaining consumer engagement with products, entertaining the audience, and shaping users' emotions and involvement.

During the crisis stage, both organizations and consumers employ the persuasion mechanism to either amplify or alleviate the crisis's impacts. This involves disseminating crucial information, shaping public opinion, spreading misinformation, mobilizing

support, and assisting others. As a tool for persuasion, social media can influence audience behavior and shape risk perception.

Finally, given the significance of consumer sentiments, tourism organizations can leverage social media as an analytical mechanism during and post-crisis. As Sigala (2011) highlighted, monitoring the social media landscape offers several advantages. It aids organizations in risk mitigation and preparedness, facilitates crisis communications planning, supports crisis response and recovery efforts, and promotes organizational learning and improvement through post-crisis evaluation and knowledge sharing. Furthermore, social media data analysis empowers organizations to innovate and adapt strategies to navigate through crises effectively.

2.5. Future Research Directions

This review has generated numerous avenues for future research after systematically analyzing the existing literature on social media crisis communication within the tourism industry.

In light of recent review articles (Liu-Lastres, 2022; Upadhyay et al., 2023; Wut et al., 2021) within the context of travel businesses' and destinations' research, this study proposes a redirection of attention towards organizations' responsive strategies. Nonetheless, organizations' utilization of social media exhibits notable variations, thus necessitating future investigations to scrutinize the rationale behind marketers' decision-making regarding crisis-related strategies through comprehensive qualitative interviews. Such inquiries could elucidate whether alterations in content and associated activities were deliberate strategic maneuvers or reactive responses to prevailing circumstances (Avraham, 2021; Pachucki et al., 2022).

Furthermore, it is necessary to consider the utilization of social media by destination marketing organizations amidst crises. Zhai et al. (2019) suggest that DMOs must manage crises by providing crisis responses to all stakeholders. Prospective research endeavors could delve into the structural configuration of crisis communication networks and the coordination mechanisms operationalized via social media, encompassing stakeholders both within and beyond the purview of the tourism sector (Barbe et al., 2018; Joseph & Anandkumar, 2021; Li et al., 2022).

An intriguing discovery lies in the emergence of social media influencers as novel actors within the context of crisis. They have been portrayed as innovative elements and

strategic assets amidst the COVID-19 pandemic (Femenia-Serra et al., 2022; Ingrassia et al., 2022). Future investigations are needed to elucidate the audience's perceptions regarding the significance and efficacy of influencers (Femenia-Serra et al., 2022).

Regarding consumer research, scholars are encouraged to investigate social media users' engagement during crises more deeply. Subsequent inquiries may aim to elucidate the effects of different crisis response strategies on customers' engagement behavior (Gonzalez et al., 2021; Liu-Lastres et al., 2020). Moreover, a trajectory of research necessitates exploration into additional determinants of impact on audience reactions, such as content origin, posting format, presentation modalities, and communication methodologies (Li et al., 2022; Pachucki et al., 2022). Finally, it is recommended that future research undertake qualitative or quantitative analyses of user-generated content and responses across social media platforms to delineate the dynamics of engagement and interaction between management entities and users (Aguado-Correa et al., 2022; Möller et al., 2018).

Moreover, social media platforms play a pivotal role in fostering consumer engagement. While Twitter and Facebook emerge as prominent platforms investigated within the sample, it is imperative to acknowledge that consumers utilize diverse platforms, each endowed with unique features and functionalities that shape their efficacy in crisis communication (Nadeau et al., 2022). Consequently, the exploration of alternative social media platforms such as Instagram, YouTube, and TikTok, among others, warrants further attention. This sentiment finds resonance across several reviewed articles (Barbe & Pennington-Gray, 2018; Femenia-Serra et al., 2022; Li et al., 2022; Möller et al., 2018; Nadeau et al., 2022).

This review's findings align with Sigala's (2020) investigation, which underscores the neglect of social media's influence on tourists' perceived risk within crisis communication research. Consequently, a pressing imperative exists for novel research endeavors to bridge this void. Also, Li et al. (2022) state that risk perception varies across distinct destinations. In light of this, researchers may consider contrasting the social media impact of crisis response strategies on consumers' risk perception and decision-making across nations most and least impacted by crises.

This review has delineated the role of social media mechanisms in coping with crises within the tourism industry. Nonetheless, in line with Liu-Lastres (2022), the landscape of crisis communication is anticipated to undergo continued evolution. Given this, investigating social media's role in crisis contexts must be advanced. Future

investigations may elucidate how businesses can effectively leverage this transformative technology to foster innovation and unearth novel opportunities. Building upon this inquiry trajectory, researchers could explore how tourism enterprises and destinations contribute to public distraction via social media and its consequential impacts on public behavior and engagement. Furthermore, future studies might endeavor to identify the emotional response strategies adopted by organizations to circumvent the risk of fading into obscurity during crises. Lastly, probing into the ethical dimensions and privacy implications associated with social media data collection emerges as a critical avenue for exploration.

Furthermore, it is imperative to reconsider prior theoretical frameworks, notably the Situational Crisis Communication Theory (SCCT). Avraham and Ketter (2017) contend that most image recovery models were developed emphasizing abrupt crises, rendering them ill-suited for protracted crises such as the COVID-19 pandemic (Avraham, 2021). Additionally, theories predominantly focus on organizational contexts, thereby presenting challenges for their direct application within tourist destination management (Oliveira & Huertas, 2019). As underscored by Liu-Lastres (2022), it is imperative to broaden the purview beyond organizational crisis communication and explore the impacts of diverse stakeholders, including governmental entities and media portrayal. Thus, future research should focus on understanding the influence of audiences and other pertinent actors in crisis communication dynamics.

An aspect highlighted in this investigation pertains to the prevalent employment of cross-sectional methodologies in many studies. However, it is essential to recognize that consumer behaviors and perceptions may respond to unfolding events, particularly amidst prolonged crises. In light of this, a substantial body of literature (Aguado-Correa et al., 2022; Carvache-Franco et al., 2022b; Femenia-Serra et al., 2022; Muritala et al., 2022; Nadeau et al., 2022; Zhang et al., 2022; Zollo et al., 2022) advocates for longitudinal research designs in future crisis inquiries. Such designs facilitate the analysis of evolutionary trajectories to comprehend organizations' crisis response strategies, organizational learning processes, consumer behavior shifts, and risk perception alterations.

2.6. Conclusion

The systematic review furnishes a comprehensive exposition of contemporary practices concerning social media utilization within the tourism industry during crisis scenarios up to the year 2022. The literature analysis has yielded valuable insights and

implications, both theoretical and practical, for the advancement of the knowledge domain.

Notably, the research field has witnessed a pronounced surge in research output since 2020, propelled by the onset of the COVID-19 pandemic. A description of research methodology, crisis typologies, business sectors, and social media platforms is crucial for fostering a comprehensive understanding of the dynamics inherent in social media crisis communication research, preparing researchers to navigate forthcoming challenges and capitalize on emerging opportunities.

This study also delineates research topics by incorporating perspectives from both organizational and consumer standpoints, thereby elucidating the evolving landscape of crisis communication on social media. The advent of the COVID-19 pandemic has precipitated unprecedented challenges in global travel (Zenker & Kock, 2020) and has catalyzed a profound transformation in scholarly investigation. The findings underscore the escalating significance of social media amidst the pandemic, unveiling emergent themes such as heightened emphasis on emotional content, resilience and adaptability, innovative response strategies, and the strategic utilization of social media influencers to rehabilitate destination image. Central to these discussions is the imperative for destinations and organizations to transcend reactive strategies and ad hoc responses, pivoting towards a more emotionally driven planning approach.

This research pioneers the development of a conceptual framework delineating the implications of social media within the tourism sector during crisis scenarios, which is paramount for forthcoming research endeavors. Complementary to previous literature (e.g., Mair et al., 2016; Sigala, 2011), which primarily emphasizes the social media role during crises in information dissemination, promotional activities, and monitoring consumer behavior, this research delineates distinct mechanisms and establishes correlations between their functionalities and potential ramifications during crises. Seven social media mechanisms for navigating crises within the tourism industry have been identified: information, promotion, emotion, persuasion, distraction, analytics, and innovation. This classification has the potential to enrich existing crisis management frameworks by imbuing social media strategies with a more action-oriented perspective, thereby enhancing organizational resilience to crises of varying magnitudes and complexities.

Finally, the present review has furnished numerous pathways for prospective research endeavors, facilitating scholars in navigating the dynamic terrain of crisis

communication and image restoration within the digital epoch. These insights contribute substantively to the ongoing theoretical advancements within the tourism domain, guiding the formulation of response strategies in the face of crises.

While this research holds significance, it is imperative to acknowledge its limitations. Despite conducting searches in two prominent scientific literature databases, namely Scopus and WoS, it is plausible that additional articles exist within other academic databases. Furthermore, the analysis exclusively considered peer-reviewed articles, potentially overlooking valuable insights from other academic formats such as conference papers and thesis/dissertations. Future investigations should encompass a broader spectrum of academic endeavors to ensure a comprehensive examination of the subject matter. Additionally, expanding the scope to include languages beyond English may yield a more diverse array of search results. Lastly, the employed keywords and the criteria for inclusion/exclusion may have inadvertently restricted the sample, as exemplified by the omission of the term "hospitality," despite the relevance of numerous studies focusing on hospitality organizations. Hence, exploring alternative keywords and refining the search criteria is advisable to mitigate these limitations.

Chapter 3 - Emerging Strategies for Crisis Communication and Reputation Management in Tourist Destinations via Social Media Platforms

This chapter presents the second study of this thesis, which investigates the communication tactics and image management approaches that Destination Management Organizations adopted across diverse social media platforms. Employing a content analysis framework, the study scrutinizes messaging disseminated via the official online channels of Brazil and Portugal from March 2020 to June 2021, spanning Facebook, Twitter, and Instagram. The research contributes by (i) introducing how DMOs can implement marketing digitally by adapting the message content on social media during a crisis, (ii) enriching crisis communication theories by identifying innovative response tactics employed by tourist destinations during prolonged crises, and (iii) proposing a practical communication framework tailored specifically for DMOs.

3.1. Introduction

In uncertain times, the tourism industry faces the crucial task of crisis management to safeguard tourists' trust and manage risk perception (Sigala, 2011). As Coombs (2015) asserts, the linchpin of crisis management is communication strategies, which must be tailored to the crisis type and the organization's responsibility. In this context, recent review articles on crisis management research in hospitality and tourism (Liu-Lastres, 2022; Upadhyay et al., 2023; Wut et al., 2021) have underscored the emergence of social media as a key area of academic interest.

Social media has become a powerful tool for destinations' crisis response and recovery practices (Freberg et al., 2013). Its unique features, including rapid information transmission, wide and diverse audience reach, and interactive potential at low cost, set it apart (Oliveira & Huertas, 2019; Valentini, 2015).

Despite the recognized significance of social media, destination management organizations (DMOs) continue to encounter challenges in harnessing their potential for crisis communication (Barbe et al., 2018; Oliveira & Huertas, 2019). Mariani et al. (2016)

assert that organizations still use social media with a top-down approach, neglecting stakeholder participation. Consequently, there persists a palpable necessity for enhanced guidance and strategies within social media employment for DMOs, as underscored by Huertas and Marine-Roig (2016). On the other hand, contemporary scholarship (Joseph & Anandkumar, 2021; Pachucki et al., 2022; Pasquinelli et al., 2022) underscores the burgeoning importance of social media amidst the backdrop of the COVID-19 pandemic for destinations when DMOs have markedly intensified their efforts to project their image, promote their brands, position themselves within markets, and influence travelers' decision-making processes.

The pandemic has ushered in unprecedented challenges for global travel (Zenker & Kock, 2020), compounded by stringent travel restrictions, rendering the crisis more intricate and resilient than previous disruptions (Canhota & Wei, 2021). It has consequently emerged as a pivotal focus within the domain of tourism crisis communication (Liu-Lastres, 2022), prompting notable shifts in research emphasis. However, a limited body of research (e.g., Huertas et al., 2020) has delved into the intersection of destinations' crisis communication strategies and the real-time utilization of social media platforms during the ongoing pandemic.

The existing literature offers scant guidance to aid organizational crisis managers within destination management in selecting an appropriate crisis response strategy on social media. Conventional theories on crisis communication, initially formulated for crises like natural disasters and earthquakes (Avraham & Ketter, 2017), appear ill-suited for addressing prolonged image crises such as the COVID-19 pandemic (Avraham, 2021). Moreover, predominant theories predominantly center on organizational contexts and lack immediate applicability to tourist destination management (Oliveira & Huertas, 2019). Lastly, it is argued that conventional crisis communication theories may inadequately capture the nuances of the social media landscape (Roshan et al., 2016).

Within this context, acknowledging the imperative for destination management organizations to formulate crisis response and image recovery strategies (Coombs, 2007), coupled with the crucial role of social media in crisis communication during the COVID-19 pandemic (Pasquinelli et al., 2022), this manuscript scrutinizes the utilization of social media platforms by DMOs to engage with stakeholders during the pandemic and the audience reactions to their communications to discern a set of best practices for crisis communicators. Specifically, this research focuses on two little-explored aspects: marketing communication patterns and the execution of crisis communication strategies.

To achieve this aim, a content analysis model was developed to examine the communication strategies utilized by official Brazilian and Portuguese organizations' accounts on Facebook, Instagram, and Twitter from March 2020 to June 2021. Its objectives included identifying content disparities across platforms, comparing communication tactics between the two destinations, and evaluating audience perceptions.

This study enhances understanding of social media communication during extended crises in several ways. First, it fills a research gap regarding prolonged health crises within the tourism sector. Second, it contributes to crisis response theories by providing insights into crisis communication strategies, content organization, and social media platform choices. Lastly, amid the uncertain trajectory of the disease and its impacts on travel, this research assists DMOs in developing communication strategies and tactics to address informational challenges promptly and safeguard tourist destinations' images.

The subsequent sections are organized as follows. Initially, a theoretical framework is established by conducting a comprehensive review and synthesis of pertinent literature. Subsequently, the research methodology employed in this study is delineated, and the principal outcomes and findings are presented. Lastly, a conclusion and deliberation on the academic and managerial implications are provided.

3.2. Theoretical Background

3.2.1. Social Media and Communication

The evolution of social media from Web 1.0 to Web 2.0 occurred during the 2000s (Xiang & Gretzel, 2010). Kaplan and Haenlein (2010) define social media as "a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0 and that enable the creation and exchange of user-generated content" (p. 61). It instigated a paradigm shift in organizational communication with consumers. Unidirectional communication, primarily focused on disseminating information, transitioned into bidirectional communication, centered on fostering interactions, nurturing long-term relationships, and promoting customer engagement (Minazzi, 2015).

The utilization of social media has been propelled by significant technological advancements, notably the widespread availability of mobile Internet access and the proliferation of mobile devices such as iPhones and Android-powered devices (Xiang &

Gretzel, 2010). Consequently, social media has transformed the communication practices of tourist destinations, particularly in terms of the rapid dissemination of information, the expansive and diverse reach of audiences, and their interactive potential at a minimal cost (Barbe & Pennington-Gray, 2018; Huertas & Oliveira, 2019; Valentini, 2015). This evolution is particularly critical for DMOs, which have experienced reduced funding, operational facilities, and marketing capabilities (Gkritzali et al., 2018).

3.2.2. Online Crisis Response Communication Strategies in Tourist Destinations

As highlighted by Sönmez et al. (1994), a tourism crisis extends beyond a singular event; it represents a substantial threat to the normal functioning and operations of tourism-related businesses. Such crises can severely damage a destination's reputation in terms of safety, attractiveness, and visitor experience, ultimately leading to a decline in tourist arrivals and adversely affecting the local travel and tourism economy. In this context, it is incumbent upon DMOs to effectively manage crisis responses and contribute to restoring the destination's image (Zhai et al., 2019).

Coombs's (1998) Situational Crisis Communication Theory (SCCT) serves as a foundational theoretical framework for crisis management research in the domain of tourism (e.g., Barbe & Pennington-Gray, 2018; Barbe et al., 2018; Kwok et al., 2022; Oliveira & Huertas, 2019; Roshan et al., 2016). SCCT was introduced to establish crisis response strategies with positive outcomes for the organization, aiming to protect its reputation and reduce negative effects (Coombs, 2015). This theory points out three components as a strategic response: 1) instructional information, which explains the crisis and guides stakeholders; 2) adjustment information, which helps stakeholders deal with crises; 3) reputation management, which presents the response used by organizations to protect reputational assets, based on four strategies: denial, reduction, reparation, and reinforcement (Coombs, 2018).

Coombs (2007) classified crises into three categories: victim, accidental, and preventable. In victim crises, the public assigns minimal responsibility to the organization, recognizing it as a crisis victim. This was evident during the COVID-19 pandemic, as travel restrictions adversely impacted all stakeholders in the tourism industry (Kwok et al., 2022). Zizka and Chen (2023) further examined this phenomenon, identifying no evidence of strategies typically associated with accidental crises (such as full apology, mortification, or denial) or preventable crises (such as scapegoating, excuse, attacking the accuser, or ignoring the issue).

In the context of tourist destinations, crises prompt DMOs to prioritize the promotion of safety and reassurance for potential visitors (Avraham, 2021; Barbe et al., 2018; Ketter, 2016). Previous studies (e.g., Avraham & Ketter, 2017; Barbe et al., 2018) revealed that DMOs' crisis responses on social media predominantly focus on promotional messages to restore the destinations' image rather than providing instructive information. Conversely, certain DMOs prioritized the dissemination of technical information. Oliveira and Huertas (2019) observed that organizations primarily directed their communication efforts toward managing the event, delivering information regarding the terrorist attack, and expressing solidarity with stakeholders. Nevertheless, Gutauskas and Valdez (2019) emphasize the necessity of adopting a balanced approach, considering both promotional efforts and information about the crisis.

Coombs (2007) argues that prioritizing organizational reputation at the onset of crisis communication is inappropriate. Instead, he emphasizes that initial efforts should focus on addressing the physical and psychological well-being of those affected, with reputational concerns addressed subsequently. This approach is particularly relevant in crises that pose a threat to public safety, such as the COVID-19 pandemic, where the dissemination of instructive information on protective measures should take precedence over reputation management (Zizka & Chen, 2023). However, throughout the pandemic, destinations maintained or even intensified their image projection efforts, leveraging social media for brand promotion, market positioning, and influence travelers' decisions (Joseph & Anandkumar, 2021; Pachucki et al., 2022; Pasquinelli et al., 2022). This strategy aims to mitigate the negative impacts of crises on the destination, foster consumer confidence, and sustain tourism activity.

The literature on the COVID-19 pandemic underscores destinations and organizations' need to eschew reactive and ad hoc responses in favor of innovative strategies and emotionally resonant messaging (Liu-Lastres, 2022). During the pandemic, there was a notable content adaptation to elicit positive emotions among consumers, including reduced product-focused messages and increased emotional content (Pachucki et al., 2022). Moreover, DMOs escalated their presence on social media, primarily focusing on assuring consumers of their status as a secure place to visit (Avraham, 2021; Joseph & Anandkumar, 2021). Taecharungroj and Pattaratanakun (2023), after studying 113 DMOs, identified four general marketing content strategies: emotional, functional, experiential, and informational, used before and during the pandemic. These authors identified that DMOs, in addition to informational messages, employed communication strategies unrelated to the crisis, including emotional content that generated positive

emotions, experiential content that showed attractive images of the destination, and functional content that directly promoted their destinations.

Avraham (2021), on the other hand, categorized the pandemic crisis into three distinct phases—pre-lockdown, lockdown, and post-lockdown/recovery—and analyzed the evolution of destination organizations' discourses throughout these stages. During the pre-lockdown phase, these organizations primarily expressed concern for the public and their emotional well-being, conveying messages of empathy, safety, resilience, and adaptability. In the lockdown phase, communication strategies shifted toward minimizing and, in some cases, denying the crisis while simultaneously promoting public awareness of the importance of postponing travel, fostering innovation, emphasizing shared values, and publicizing future projects. In the post-lockdown/recovery phase, the focus was on instilling a sense of security among consumers while also encouraging public support for the revival of tourism activities.

Furthermore, certain factors, such as response time, play a critical role in crisis communication. Specifically, the interval between the onset of the crisis and the issuance of the first response, as well as the frequency of messages related to the event, are key determinants of effective communication strategies (Barbe et al., 2018; Zhai et al., 2019). Agility in response is essential to avoid the proliferation of inappropriate news and negative sentiment (Coombs, 2007; Oliveira & Huertas, 2019; Zhai et al., 2019).

Under this context, SCCT strategies may not be entirely suitable for communication methods employed by DMOs on social media during the pandemic. Therefore, beyond the fundamental crisis response, a pandemic of this magnitude necessitated supplementary strategies (Zizka & Chen, 2023).

3.2.3 Social Media Marketing Strategies During a Crisis

Social media platforms have become a marketing tool for DMOs, serving a dual role in promoting tourism during regular periods and mitigating negative perceptions during crises (Taecharunroj & Pattaratanakun, 2023). However, existing studies (e.g., Barbe et al., 2018; Huertas & Oliveira, 2019; Oliveira & Huertas, 2019) suggest that DMOs have not fully leveraged the potential of social media during crises, often failing to effectively engage stakeholders in their communication strategies.

This can be attributed to the fact that, as Molina et al. (2020) point out, social media marketing strategies within DMOs are still in the process of development and refinement. In addition, existing crisis communication frameworks, such as SCCT, tend

to overlook the marketing strategies employed during regular periods (Taecharungroj & Pattaratanakun, 2023). Likewise, the literature on marketing communication strategies in non-crisis contexts does not typically account for crisis situations (e.g., Hays et al., 2013; Molina et al., 2020; Uşaklı et al., 2017). Therefore, it is important to understand how DMOs have utilized social media as a marketing tool to identify the most effective strategies for crisis communication.

Uşaklı et al. (2017) and Hays et al. (2013) analyzed social media as a destination marketing tool and presented similar results for regular-period marketing communication on social media. Hays et al. (2013) investigated 10 DMOs' utilization of social media, on Twitter and Facebook, categorizing content into five distinct types: customer service, promotional, contest-related, solicitation for user-generated content, and informational. Uşaklı et al. (2017) extended the content investigation to 50 European DMOs and four platforms (Facebook, Instagram, Twitter, and YouTube), identifying seven categories: content, major theme, information type, engagement, interactivity, promotion, and customer service.

Their results revealed that a great majority of posts were promotion-related. These posts were frequently used to project destination image, such as natural attractions, cultural attractions, historical attractions, local cuisine, and recreation facilities (Uşaklı et al., 2017). But the literature underscores that the COVID-19 crisis required content changes, such as reducing marketing-focused messages related to the products and deepening emotional content (Aguado-Correa et al., 2022; Gonzalez et al., 2021; Pachucki et al., 2022).

Regarding the information type, both studies indicated that the information provided by DMOs in their posts during the regular period is mainly subjective (opinions/reviews) rather than objective (factual/historical information). In a crisis period, the dissemination of information plays an important role, typically focusing on explaining the event and providing guidance on stakeholder protection (Barbe et al., 2018; Oliveira & Huertas, 2019). However, during the COVID-19 pandemic, Aguado-Correa et al. (2022) suggest that organizations largely delegated the responsibility for communicating safety and health measures to the official websites of government health institutions.

Posts customer service-related focused on issues related to postings of the DMOs responding to criticisms, inquiries, compliments from customers, or thanking and requesting feedback from customers (Uşaklı et al., 2017). The posts classified as customer service-related in regular periods were extremely low, suggesting that either

DMOs do not use social media as a customer service tool or travelers do not use DMOs' social media to voice their satisfaction or complaints (Hays et al., 2013; Uşaklı et al., 2017). Contrarily, in a crisis context, according to Barbe et al. (2018), many DMOs used Twitter to provide customer service to their followers about the terrorist attack. However, this was notably less frequent than the promotional-related content shared.

Molina et al.'s (2020) findings highlighted interactivity as a key factor in engagement, defining it as a two-way communication process between organizations and consumers. One effective approach to fostering interactivity is the use of call-to-action messages, which capture the audience's attention and encourage engagement with the organization. These messages may include, for example, collaboration requests, trivia questions, or announcements of ongoing contests (Minazzi, 2015). However, no studies have specifically examined the use of such interactive messages in crisis contexts, leaving it unclear whether DMOs employ these strategies during crises.

Furthermore, Molina et al. (2020) emphasized that appropriate content generated by destinations can engage digital audiences and trigger behavioral responses. Elements such as photos, videos, hyperlinks, and other design features impact the level of attention and engagement of social media users (Kwok et al., 2022). During the COVID-19 pandemic, Huertas et al. (2020) observed that graphic text elements, including photos, hashtags, and links, were predominant in social media communications.

Customer engagement refers to observable consumer behaviors, both positive and negative, towards a brand, product, or company on social media platforms (Van Doorn et al., 2010). User reactions, such as likes, comments, or shares, serve as measures to gauge the reception and acceptance of messages (Hays et al., 2013; Usakli et al., 2017). Studies on the COVID-19 pandemic indicated that users displayed greater engagement with emotionally driven posts rather than traditional tourism promotion content (González et al., 2021; Taecharungroj & Pattaratanakun, 2023). As Huertas and Marine-Roig (2015) suggest, monitoring such engagement patterns provides DMOs with valuable insights to tailor marketing and image management strategies during crises.

The type of social media platform can also influence user engagement. For example, Usakli et al. (2017) show that Instagram and Facebook posts of DMOs create much higher levels of customer engagement than Twitter and YouTube posts. Social media platforms exhibit considerable diversity in their services, reach, and usage patterns. For instance, Twitter and Facebook are primarily characterized by textual and narrative content, as well as the accessibility of data (Huertas & Marine-Roig, 2016; Obembe et al.,

2021). In contrast, Instagram stands out for its unique combination of evocative photographs with concise textual content, enhancing destination imagery and influencing public emotions (Filieri et al., 2021; Pasquinelli et al., 2022). Therefore, each platform will require a different marketing strategy.

Consequently, message content, format, and the choice of social media platform are critical components in developing effective marketing strategies during a crisis. However, as Taecharungroj and Pattaratanakun (2023) highlighted, identifying the most suitable marketing strategy during a crisis presents significant challenges due to social media's complex and dynamic nature. It is, therefore, necessary to identify effective strategies for use during crises, thereby contributing to and expanding the existing body of literature in this field.

3.3. Methodology

3.3.1 Research Questions

This research investigates how DMOs engage with stakeholders on social media during prolonged crises. Consequently, the following research questions (RQ) were formulated:

RQ1. What are the communication characteristics of the DMOs' official profiles in Brazil and Portugal on social media?

RQ2. During the COVID-19 pandemic, what strategies have DMOs employed to engage with their respective audiences utilizing social media platforms?

RQ3. What are the audience's reactions to DMO messages on social media in different media types?

3.3.2. Research Setting

The research is situated within the context of the COVID-19 pandemic, which has precipitated a prolonged crisis in the global tourism sector. Given the varied post-crisis recovery trajectories, Brazil and Portugal were chosen as focal points for the study. Portugal responded to the crisis by implementing several measures to contain its spread and mitigate its impacts on the tourism industry (Turismo de Portugal, 2020). Conversely, Brazil emerged as the second-worst-affected nation by the virus, as indicated by data from September 2020 (Johns Hopkins, 2020).

Portugal, renowned as a global leader in tourism, adeptly managed the crisis through governmental interventions, subsequently experiencing a swift recovery in the tourism sector (WTTC, 2019). In contrast, Brazil, renowned for its rich and diverse natural attractions, encountered difficulties enhancing its international tourism appeal. (UNWTO, 2019). Portugal's strategic initiatives and recognition as a premier tourist destination underscore its resilience, while Brazil grappled with stagnation in international tourist arrivals and tourism revenues throughout 2019.

3.3.3. Data Collection

Facebook, Instagram, and Twitter social media platforms were explored due to their substantial audience, organizational engagement, and the availability of publicly accessible data (Barbe & Pennington-Gray, 2018; Ketter, 2016; Mariani et al., 2016; Huertas & Oliveira, 2019; Huertas et al., 2020). Data spanning 16 months, from March 1, 2020, to June 30, 2021, was gathered for analysis, considering the global escalation of the pandemic from February 2020 and its subsequent subsiding by June 2021 (UNWTO, 2022; WHO, 2020).

The NCapture software, in conjunction with manual methods, was utilized to collect 3058 messages from the official profiles responsible for destination international promotion, specifically "@VisitBrasil" (managed by Embratur) and "@VisitPortugal" (managed by Turismo de Portugal). Data collection occurred between December 1 and December 22, 2021. All content analyzed is publicly available and can be accessed directly through the official profiles of the DMOs. Language criteria were applied to screen the accounts, with only those operating in English being included in the analysis. While the majority of posts were in English, Portugal's posts featured a variety of languages, particularly on Facebook. However, these multilingual posts mirrored the English versions. Following this procedure, the final sample consisted of 1611 posts, comprising 91 from Brazil and 1520 from Portugal (See Table 3.1).

Table 3.1. Data Panel

Social Media	@VisitBrasil		@VisitPortugal	
	Total no. of posts	Total no. of analyzed post	Total no. of posts	Total no. of analyzed post
Facebook	34	33	1077	328
Instagram	39	39	355	350
Twitter	19	19	1534	842
Total	92	91	2966	1520

* Data collected on December 22, 2021.

3.3.4. Categorization

Content analysis was selected as the research method as it allows a set of procedures to make valid inferences from the text (Bardin, 1979). It is considered highly suitable for analyzing communication in a crisis context (Huertas & Oliveira, 2019). A two-phase study, consisting of a pilot phase and a primary phase, was conducted to gain a deeper understanding of the social media usage of DMOs during the COVID-19 pandemic.

As previously stated, a total of 1,611 social media posts were collected. To determine the appropriate measures for content analysis, a pilot study was conducted in January 2021. This study analyzed all posts published on Facebook, Twitter, and Instagram during the first three months of the COVID-19 crisis, from March 1 to May 30, 2020, resulting in a sample of 314 posts from both Brazil and Portugal.

The theoretical framework for category development was based on prior studies, with message content classifications informed by Hays et al. (2013), Uşaklı et al. (2017), and Molina et al. (2020), while crisis communication categorizations were drawn from Coombs (2007), Liu et al. (2011), Cheng (2018), Huertas et al. (2020), Avraham (2021), Ulmer et al. (2007), and Zizka and Chen (2023).

Following this approach, a systematic categorization procedure was implemented, guided by a defined set of coding rules, through which the entire dataset of 1,611 posts was analyzed.

3.3.5. Content Analysis Template

The analysis was structured into three parts: (1) Communication characteristics, (2) Message content, and (3) User reaction.

Part 1: Communication Characteristics

Formulated to address RQ1, this category aims to explore DMOs' communication characteristics and procedures on social media during the crisis. Initially, distinctions were drawn to ascertain crisis-related messages, identifying keywords associated with the pandemic, drawing from prior literature (Carvache-Franco et al., 2022; Huertas et al., 2020; Taecharungroj & Pattaratanakun, 2023). Post containing the following words were classified as a crisis-related message: "lockdown," "risk," "safe," "safety," "health," "social", "distancing," "hope", "travel", "visit", "flight", "tourist", "arrival", "information", "visitors", "covid", "virus", "test", "pcr", "please", "time", "airport", "update", "people", "health", "help", "need", "support", "state", "public", "business", "worker", "work", "job",

“stay, “home”, “support”, “care”, “live”, "family", "government", “impact”, "society", “global”.

A chronological analysis evaluated DMOs' communication speed, the continuity of crisis-related messages, post frequency, and social media platform usage. This data facilitated an understanding of organizations' immediate responses to the crisis announcement and their overall communication efficiency (Coombs, 2015; Huertas et al., 2020). Emphasizing the significance of organizational proactivity in communication during crises (Fowler, 2017), the study also examined the origin of messages, differentiating between original and third-party posts. Furthermore, it identified the communication resources utilized, including graphics (text, image, video, link), offering a comprehensive understanding of the content design and interactive strategies employed (Barbe et al., 2018; Hays et al., 2013; Huertas et al., 2020; Uşaklı et al., 2017).

Part 2: Message Content

In response to RQ2, the analysis focused on two main categories: (i) types of messages and (ii) crisis communication strategies.

Types of messages

The coding scheme was adapted from Hays et al. (2013). Messages were classified into five categories: Promotion, Information, Customer Service, Call-to-Action, and General.

- i. "Promotion" deals with the type of promotional information utilized by DMOs on social media. Encompasses the official website and other DMO media, external websites, and DMO campaign promotions. Also, attributes of destination image, using a total of 15 cognitive image attributes such as arts and crafts, celebrations and events, food and drink, infrastructure and facilities, music, dance, language, literature, safety, tourism experience, and tourist attractions and spaces, based on prior literature (Beerli & Martín, 2004; Echtner & Ritchie, 1993; Hays et al., 2013).
- ii. "Information" is related to the classification of information in social media postings. It includes pandemic-related content, factual or historical information, providing dates or background information on specific topics, and opinion-oriented content, such as information on top lists or reviews of attractions.
- iii. "Customer Service" involves responses to feedback and inquiries. focused on issues related to customer service in order to understand whether or not DMOs

use social media to provide customer service. It includes responding to criticisms, inquiries, and compliments.

- iv. "Call to Action refers to a post in which DMOs directly interact with their users. It covers collaboration requests and contests. a question to travelers or requests input from travelers, such as feedback, photos, or videos.
- v. "General" refers to the posts that did not fit in any category. It included miscellaneous posts, for example, "good morning".

Appendix B (Table B.1.) presents examples of DMO’s social media messages content to dealing with the COVID-19 pandemic.

Crisis Communication Strategies

For the second category, crisis-related messages were analyzed using the Situational Crisis Communication Theory (SCCT) framework, which encompasses instructional, adjusting, and reputation repair components. However, the distinct nature of the COVID-19 pandemic required additional strategies within the SCCT "Reputation Repair" framework. Notably, the absence of Bolstering, Endorsement, and Ingratiation strategies suggests that Coombs’s (2007) reinforcement responses may be less applicable to tourist destinations than to the hospitality sector, as highlighted by Liu-Lastres et al. (2020). Ultimately, seven distinct social media crisis communication strategies employed during the pandemic were identified. Table 3.2 provides further details on these strategies.

Table 3.2. Crisis Response Strategies on Social Media

Crisis Response	Purpose/Description	Relevant literature
Instructing information	To describe the event (what happened, when, where, and why), statistical data about the crisis, information about lockdown measures (such as critical dates), and updates on legislation and news.	Coombs (2007); Huertas et al. (2020); Liu et al. (2011);
Adapting information	To provide emotional support, including compassion, understanding, comfort, and encouragement, and to inform the public about corrective actions and plans to address or prevent the crisis’s problems.	Coombs (2007); Jin & Liu (2010)
Enhancing	To promote ongoing positive initiatives, share favorable crisis-related information, and reinforce the destination’s safety.	Avraham (2021); Cheng (2018); Kim & Liu (2012)
Distraction	To suggest behaviors and activities that can be undertaken during the crisis as alternative experiences.	Corrêa et al. (2024); Huertas et al. (2020)
Renewal	To shift from defensive discourse to optimistic rhetoric during the post-crisis phase.	Ulmer et al. (2007); Zizka & Chen (2023)
Transferring	To enhance credibility by leveraging endorsements from reputable third parties.	Cheng (2018); Kim & Liu (2012)
Victimage	To claim victim status during the crisis.	Coombs (2007)

Part 3: User Reaction

To address RQ3, the model evaluates the social media users' reactions to DMOs' posts, measuring the average "likes" and "comments/replies". These metrics gauge the success of communication strategies employed by DMOs, aligning with interactive engagement indicators established in prior studies (Barbe & Pennington-Gray, 2018; Hays et al., 2013; Huertas & Marine-Roig, 2016; Huertas & Oliveira, 2019; Minazzi, 2015).

Table 3.3 presents a summary of each item created to measure the categories and variables of the content analysis.

Table 3.3. Content analysis template

Group	Category	Variable
Communication Characteristics	Message purpose	Event-related and non-event-related
	Message Origin	Original message or message from others
	Response time	Date of first message about the event
	Timeline	Dates following messages related to the event
	Daily frequency	Number of messages per day
	Frequency	Number of messages during the period analyzed
	Resources	Text, image, video, link
Message Content	Type of message	Promotion (Official website and other DMO media, External website and other media, DMO campaign, and destination)
		Information (Pandemic information, Factual information, Opinion and Review, Non-touristic information)
		Customer Service (Responding to a criticism/compliment, Thanking users, Reply to an information request)
		Call-to-Action (Collaboration request, UGC request, Asking or answering a trivia question, Announcing an ongoing contest and the contest winner)
User Reaction	Crisis communication strategies	General message
		Instruction information (Technical information)
		Adjusting information (Corrective action and emotional)
User Reaction	Audience Engagement	Reputation repair (Bolstering, Distraction, Endorsement, Enhancing, Ingratiation, Renewal, Transferring, and Victimage)
		Average number of likes and comments

3.4. Findings

To explore the utilization of social media by destination management organizations during the COVID-19 pandemic, data extracted from social media platforms (Facebook, Instagram, and Twitter) were analyzed from March 1, 2020, to June 30, 2021. This section is structured into three components: Communication characteristics, Message content, and User reaction.

3.4.1 Communication Characteristics

As outlined in Table 3.1, both organizations presented social media activity during the pandemic, comprising 3058 posts across Facebook, Instagram, and Twitter—92

originating from the @VisitBrasil account and 2966 from @VisitPortugal. Remarkably, the Portuguese organization demonstrated considerably higher activity levels compared to its Brazilian counterpart, illustrating a seventeen-fold difference in publication frequency. The Brazilian DMO experienced interruptions in communication during the latter half of 2020, with resumed activity only in July 2021. This underscores that the analyzed sample does not substantiate the equal significance of social media engagement for both destinations.

The notable volume of messages associated with Portugal can also be attributed to the dissemination of identical content across various languages. The Portuguese organization employed English for its Instagram content. At the same time, Twitter and Facebook accommodate a variety of languages, including English, Portuguese, Czech, Dutch, French, German, Italian, Japanese, Korean, Polish, Spanish, and Swedish. This practice aligns with Hays et al. (2013), who assert that DMO accounts may be organized by language. English predominated within the Brazilian DMO's social media communication, with Spanish specifically reserved for content posted on Instagram.

Out of the 1,611 posts subjected to analysis, only 273 were crisis-related messages. Portugal was the leading country, with 249 posts (16%) (Table 3.4).

Table 3.4. Origin and purpose of published messages

Message	Brazil		Brazil		Twitter		Portugal		Portugal		Twitter	
	Facebook N	%	Instagram N	%	N	%	Facebook N	%	Instagram N	%	N	%
Crisis-related messages	10	30	12	31	2	11	65	20	25	7	159	19
Non-crisis related messages	23	70	27	69	17	89	263	80	325	93	682	81
Original message	33	100%	39	100	19	100	282	86	350	100	457	54
Message from others	-	-	-	-	-	-	46	14	-	-	385	46

As shown in Figure 3.1, the crisis-related message was posted primarily on Twitter. Brazil presented 24 pandemic messages (26%), mainly on Facebook and Instagram. The findings from Portugal align with previous research, which demonstrated that Twitter served as an effective communication tool during the COVID-19 pandemic due to its ability to deliver real-time news updates (Carvache-Franco et al., 2022; Taecharungroj & Pattaratanakun, 2023). However, in Brazil, most crisis messages were disseminated through Instagram and Facebook, with comparatively limited use of Twitter during the analyzed period.

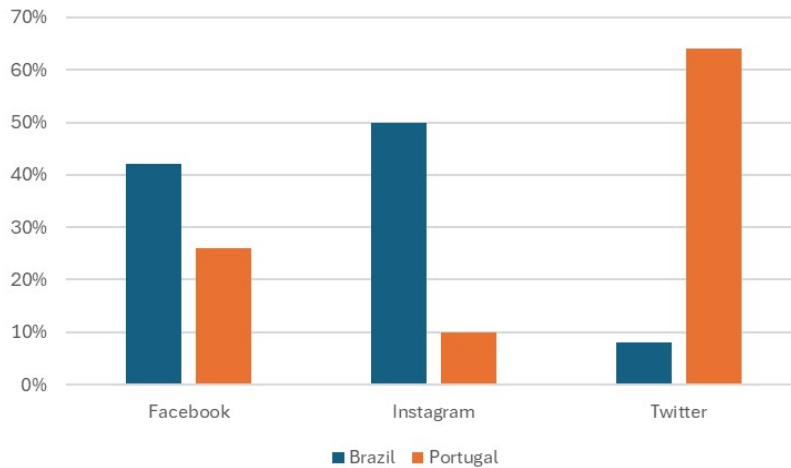


Figure 3.1. Relative frequency of crisis-related messages on Brazil and Portugal's social media

Regarding the origin of the messages (Table 3.4), it is notable that 73% of the pandemic-related content analyzed from both organizations was self-produced, as suggested by previous literature (e.g., Fowler, 2017; Huertas & Oliveira, 2019), which underscores the role of organizations as the primary source of information during crises. The Portuguese organization employed a combination of original messages and shared relevant information previously disseminated by other entities, particularly on Twitter.

The study's findings also demonstrate that DMOs incorporated supplementary resources in their messages, including photographs, website links, and videos, thereby enhancing the breadth, depth, and credibility of the message while providing essential information to their audience, as recommended by Hays et al. (2013) (See Figure 3.2). Notably, organizations exhibited a higher frequency of sharing photos than other media formats, consistent with prior scholarly inquiries (e.g., Huertas et al., 2020; Kwok et al., 2022). Instagram emerged as the primary platform for disseminating visual content across both destinations. As posited in existing literature (Filiari et al., 2021; Pasquinelli et al., 2022), this platform amalgamates the evocative potential of imagery with concise yet impactful textual content, thereby fortifying the destination's image and exerting influence over public sentiment. The findings align with previous research (e.g., Huertas & Marine-Roig, 2016), indicating that Twitter and Facebook are more commonly utilized for textual and narrative-based content dissemination.

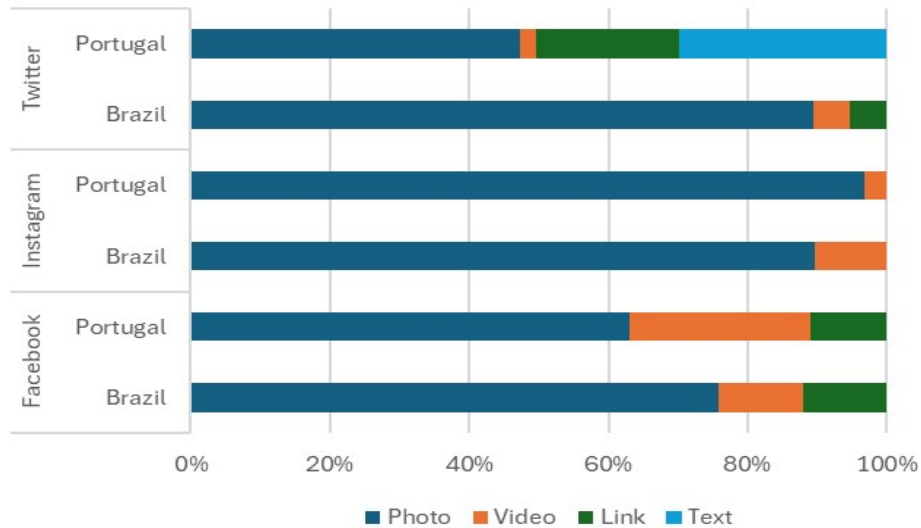


Figure 3.2. Message resources utilization by DMOs in Brazil and Portugal across various social media platforms

Given the timely communication in crisis management (Coombs, 2015), the research findings suggested a deficiency in proactive response from DMOs. Despite the increased media attention following the WHO's official declaration of the pandemic, organizations took approximately six days to address the issue on their social media accounts. According to Gkritzali et al. (2018), DMOs should promptly implement crisis management strategies immediately following the onset of a crisis. Zhai et al. (2019) emphasize that an agile response is crucial to prevent the spread of misleading information and negative emotions. Considering the critical importance of consistent crisis communication (Coombs, 2007), it is concerning that the DMOs disseminated limited online crisis information at the onset of the pandemic. Figure 3.3 shows the communication frequency on both destinations.

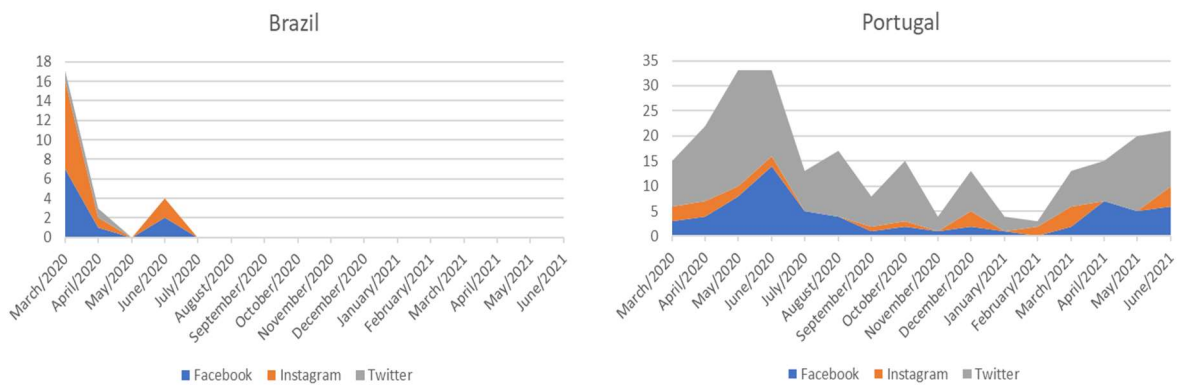


Figure 3.3. Number of social media COVID-19-related messages per month/year.

3.4.2 Content Analysis of Social Media Messages During COVID-19

3.4.2.1 Classification of Social Media Messages

The messages from Brazilian and Portuguese DMOs were systematically categorized into distinct types, namely Call-to-Action, Customer Service, General, Information, and Promotion (Figure 3.4). See Appendix B (Table B.2.) for a detailed breakdown of subcategories.

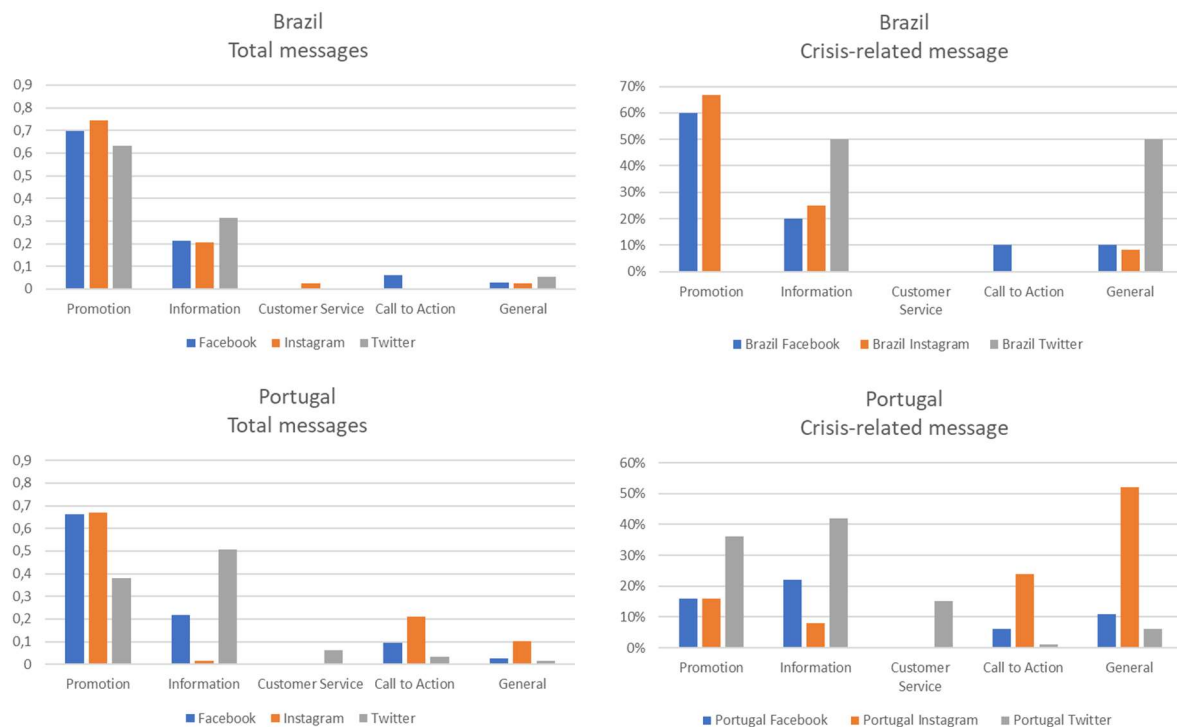


Figure 3.4. Type of messages distributed by DMOs in Brazil and Portugal on social media during the COVID-19 pandemic.

The findings reveal a predominant prevalence of Promotion (52%) and Information (33%) messages across both Brazilian and Portuguese DMOs. Notably, promotional content is primarily disseminated through Facebook and Instagram. Within the Promotion category, 45% of the content pertains to tourist attractions and venues (29%), with a notable emphasis on tourist attractions situated in open-air environments. Although official DMO websites, external websites, other social media outlets, and DMO campaigns were also promoted, their frequency was notably low, consistent with the findings of Usakli et al. (2018). Example:

Brazil (Facebook, 05/25/2020): “Brazil is the country of beaches, rivers and waterfalls. This one is cachoeira das araras located in Palmas in the state of Tocantins.”

Portugal (Instagram, 05/04/2021): “If you're into adventure and nature, you'll love a hike through Madeira's levadas and its stunning waterfalls. [Photo: @barus_kucerova] #CantSkipTomorrow #Madeira”

While analyzing crisis-related messages, Portugal's DMO notably reduced its promotional communication. The primary focus within promotional content, comprising 16% of the total, was directed towards destination safety, with particular emphasis placed on highlighting the 'Clean & Safe' certification initiative launched in April 2020. Between March and May 2020, 11% of the messages were aimed at promoting external websites as part of a strategy to discourage travel by showcasing virtual experiences. This communication served as a distraction mechanism during the lockdown period, concurrently highlighting the diverse activities available within the destination. These outcomes underscore the organization's steadfast commitment to persist in promoting the destination, albeit with a heightened focus on ensuring tourist safety, echoing the scholar's research on destinations' crisis communication during COVID-19 (e.g., Avraham, 2021; Huertas et al., 2020; Joseph & Anandkumar, 2021). The contents were predominantly distributed through Facebook and Twitter platforms. Example:

Portugal (Twitter, 04/29/2020): “#Portugal launches 'Clean & Safe' stamp of approval to reassure holidaymakers <https://bit.ly/2W3Z3K8> via @Independent_ie Hotels, restaurants, and tourism businesses in Portugal have been invited to apply for a 'Clean & Safe' stamp showing they adhere to hygiene protocols.”

Informational content accounted for 23% of the posts in Brazil and 33% in Portugal. Twitter emerged as notably prominent in Portugal, hosting 51% of information-related posts. The pandemic-related information predominated in crisis messages across both DMOs, comprising 17% of the total content for each organization. Until the conclusion of August 2020, Portugal prioritized security measures information about COVID-19. Considering the overall number of messages, factual information was the most prevalent content type in Brazil, accounting for 71% of information-related posts—particularly those concerning festivals and commemorative days. In contrast, in Portugal, opinion and review content predominated, representing 73% of such posts and focusing primarily on industry news, awards, and recognitions. These results align with Uşaklı et al. (2017), who found that the information shared by DMOs on social media tends to be primarily opinion or review-based for well-established destinations (e.g., Turkey, Germany, France, and Spain), whereas emerging destinations were more likely to provide factual information (e.g., Moldova, Monaco, Latvia, and Romania). Example:

Brazil (Instagram, 04/20/2020): “Brasília, the country's built-from-scratch capital of Brazil, was inaugurated 60 years ago and hosts many architectural masterpieces. The Juscelino Kubitschek bridge is

one of them and it can be even more beautiful seen from above. Happy anniversary to this amazing city!
:@gabrielismn #VisitBrasil #Brasilia #travel #architecture”

Portugal (Twitter, 04/07/2020): “#Portugal’s #Algarve Coast is the #1 option for Living And Retiring Overseas Post The Coronavirus according to @Forbes <https://bit.ly/2XhCkwv> Thanks to its Year-round Sunshine, Safety, Good Infrastructure, International Standard Health Care, Golf, Great Beaches... #CantSkipHope”

Approximately 8% of the posts were classified as Call-to-Action content, predominantly distributed through Instagram and Facebook. This contrasts with findings from studies conducted during normal times, which identified Twitter as the most interactive social media platform for DMOs (Hays et al., 2013; Uşaklı et al., 2017). Such a strategy is designed to cultivate consumer interaction and augment engagement, as advocated by Minazzi (2015). However, the findings revealed that this strategy was not frequently employed by DMOs, particularly in Brazil, where it was used in only 2% of the posts. Portugal had 9% within this category, often asking or answering a trivia question (60%) and announcing an ongoing contest (19%). Example:

Brazil (Facebook, 05/07/2020): “What is the first word that comes to your mind when you look at this picture in Bonito, Mato Grosso do Sul? #VisitBrasil #VisitAndLoveUs #Travel #Destination”

Portugal (Instagram, 09/04/2020): “Can you guess where in Portugal is this beach? [Photo: @sara_vianna] #CantSkipPortugal #Madeira”

Customer service was rarely utilized, comprising only 3% of the messages. As noted by Uşaklı et al. (2017), the findings revealed that DMOs did not frequently use social media as a customer service tool, nor did customers commonly use this medium to make inquiries, even during a crisis. Portugal's Twitter account recorded 42 replies to information requests, with 23 of these responses individually addressing COVID-19 inquiries. This suggests that the Portuguese DMO offered personalized responses, potentially fostering a perception of direct engagement, as recommended by Hvass (2013). Example:

Portugal (Twitter, 06/02/2020): “Replying to @RanaBal_ and @TelegraphTravel. Hi Rana, You will find all the information on Visas and Online Visa Application for Portugal here: <https://bit.ly/36TWZJz>”

The General category constitutes 4% of posts, predominantly observed on Instagram, characterized by greetings and inspirational content. This approach employs heightened emotional expressions while circumventing explicit references to pandemic problems. The findings suggest that Portugal's organization endeavored to evoke positive emotions among consumers by amplifying emotional content messages following prior research recommendations (e.g., Aguado-Correa et al., 2022; Gonzalez et al., 2021; Li et al., 2022; Pachucki et al., 2022). Example:

Brazil (Facebook, 04/08/2020): “Day after day we still here, prepared to receive your visit soon. The sun will come up tomorrow! Of that we are sure! @douglas Guide and Photographer from Rio de Janeiro – RJ”

Portugal (Instagram, 03/05/2020): “Open arms and open heart: the right way to travel and explore. [Photo by: @henriqueabreu.97] #CantSkipPortugal #Madeira”

Therefore, the present study confirms that both DMOs used social media as a traditional marketing tool during the COVID-19 pandemic. However, notable differences in content strategy emerged, the Portuguese DMO prioritized emphasizing the destination’s safety to reassure consumers of its status as a safe and welcoming place to visit. Additionally, it demonstrated a greater focus on generating positive emotional responses. In contrast, the Brazilian DMO concentrated more heavily on destination promotion.

3.4.2.2 Crisis Communication Strategies

The crisis-related messages on social media underwent analysis utilizing the SCCT Strategies framework structure (See Table 3.5).

Table 3.5. Brazil and Portugal's crisis communication strategies on social media

Category	Brazil						Portugal						Total	
	Facebook		Instagram		Twitter		Facebook		Instagram		Twitter		N	%
	N	%	N	%	N	%	N	%	N	%	N	%		
Instructing information	1	10%	2	17%	1	50%	9	14%	1	4%	23	14%	37	14%
Technical information	1	10%	2	17%	1	50%	9	14%	1	4%	23	14%	37	14%
Adjusting information	0	0%	0	0%	0	0%	9	14%	3	12%	46	29%	58	21%
Emotional	0	0%	0	0%	0	0%	4	6%	3	12%	7	4%	14	5%
Corrective action	0	0%	0	0%	0	0%	5	8%	0	0%	39	25%	44	16%
Reputation repair	9	90%	10	83%	1	50%	47	72%	21	84%	90	57%	178	65%
Bolstering	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Distraction	7	70%	8	67%	0	0%	16	25%	0	0%	21	13%	52	19%
Endorsement	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Enhancing	0	0%	0	0%	0	0%	9	14%	0	0%	21	13%	30	11%
Ingratiation	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Renew	0	0%	0	0%	0	0%	11	17%	13	52%	29	18%	53	19%
Transferring	0	0%	0	0%	0	0%	4	6%	0	0%	9	6%	13	5%
Victimization	2	20%	2	17%	1	50%	7	11%	8	32%	10	6%	30	11%
Total	10	100%	12	100%	2	100%	65	100%	25	100%	159	100%	273	100%

Under prior crisis research (e.g., Barbe et al., 2018; Oliveira & Huertas, 2019), Reputation Repair emerged as the primary strategy employed for crisis management,

evident in 65% of the total crisis-related messages across both DMOs. An unexpected observation was the notable absence of Bolstering, Endorsement, and Ingratiation strategies, suggesting that Coombs's (2007) reinforcement responses may not hold the same relevance for tourist destinations as they do for the hospitality sector, as indicated by Liu-Lastres et al. (2020). Furthermore, contrary to previous findings (e.g., Barbe et al., 2018), the Victimization strategy did not constitute the predominant response to the crisis, being adopted in only 11% of the messages. This suggests that DMOs adopted a more proactive approach in their crisis communication endeavors during the pandemic.

The Brazilian DMO predominantly employed the Distraction (63%) and Victimization (21%) strategies on social media platforms. In contrast, Portugal's social media strategies encompassed Renewal (21%), Distraction (15%), Enhancing (12%), Victimization (10%), and Transferring (5%) strategies implemented across Twitter and Facebook. Instagram showcases a distinctive response characterized by Renewal (52%) and Victimization (32%) (Figure 3.5).

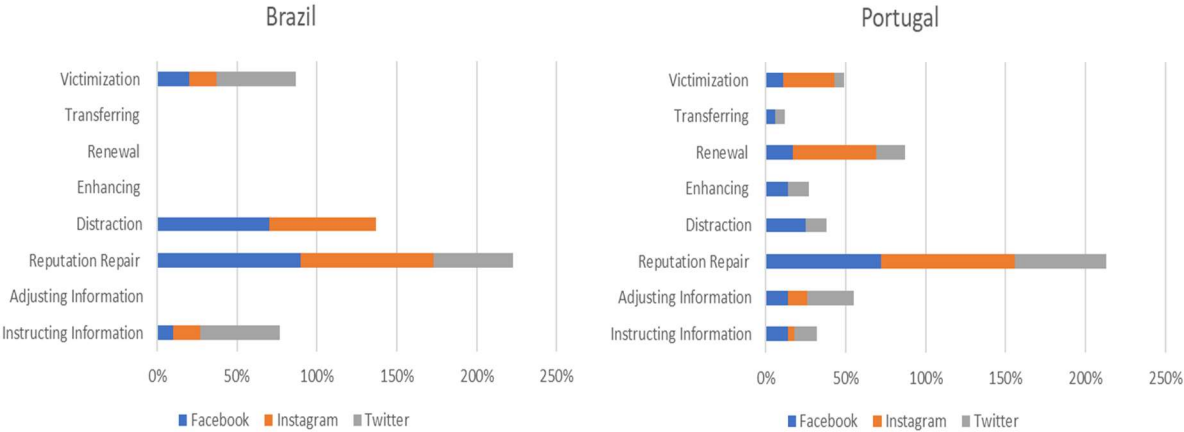


Figure 3.5. Brazil and Portugal's crisis communication strategies on social media during COVID-19.

A noteworthy discovery was the adoption of the Distraction strategy by both DMOs, constituting 19% of the posts. This approach, evident during the initial stages of the crisis, aimed to encourage individuals to adhere to stay-at-home guidelines while intertwining promotion with safety advocacy, reminiscent of the findings by Huertas et al. (2020). Furthermore, confronted with travel restrictions, DMOs utilized the Distraction strategy to maintain communication with tourists when traditional business operations were no longer feasible. This entailed offering entertainment content and sharing recommendations for books, movies, music, and local cuisine. In addition to the aforementioned content, Portugal's DMO actively promoted virtual tourist experiences,

such as tours, exhibitions, and events, across various social media platforms during the lockdown period, with a notable emphasis on Twitter and Facebook.

Renewal emerged as the primary response strategy adopted by the Portuguese DMO. The organization conveyed an optimistic message regarding post-crisis scenarios, encouraging future travel plans and providing comprehensive guides to potential destinations post-lockdown. This observation aligns with Ulmer et al.'s (2007) findings, highlighting the significance of renewal alongside image restoration as a prevalent genre within post-crisis discourse. These response strategies conveyed a sense of optimism, resilience, and determination, aligning with prior studies (e.g., Avrahan, 2021; Barbe & Pennington-Gray, 2018; Barbe et al., 2018; Huertas & Oliveira, 2019; Huertas et al., 2020), which underscore the importance of an optimistic discourse and proactive measures in facilitating the destination's image recovery.

Subsequently, the Portuguese organization notably prioritized promoting the destination's safety in response to concerns arising from the pandemic. Strategies such as Enhancing and Transferring were employed to bolster perceptions of safety and credibility in anticipation of tourism resumption. Until the conclusion of August 2020, efforts to highlight security measures in the destination garnered international recognition, including selections by entities such as "European Best Destinations" and "Top 10 Safest Destinations to Visit". Moreover, the organization strategically leveraged third-party credibility sources such as the World Travel & Tourism Council (WTTC) to enhance its reputation.

Adjusting and Instructing Information were utilized by DMOs, highlighting crisis management and the safeguarding of stakeholders. However, the Brazilian organization displayed minimal information dissemination during the crisis, featuring only four instructing messages and no adjusting information. In contrast, Portugal employed Instructing Information in 13% of the messages in 2020, concentrating on the crisis onset, tourism reopening, and legislative alterations. On Twitter, 23 messages were posted about new restrictions in October 2020 and updates on the resumption of tourism in April 2021. Notably, statistical data on disease prevalence were absent from these messages, which instead focused on crucial dates, regulations, and preventive measures to mitigate adverse impacts on social media, aligning with the recommendations of Novelli et al. (2018) and Pachucki et al. (2022).

Adjusting information was exclusively employed by the Portuguese DMO, constituting 21% of crisis-related messages. These communications emphasized protective measures

like the Clean & Safe label and promoted safety information sources. Remarkably, the DMO intensified the dissemination of these messages on Facebook and Twitter in April 2020, prioritizing showcasing the destination's safety and persuading consumers that it remained a secure and welcoming place. Furthermore, the Adjusting Information strategy aimed to support stakeholders and ensure the emotional reassurance of tourists. Initially, the organization's crisis response centered on information dissemination and later introduced content series like 'Can't Skip Hope,' which underscored the significance of prioritizing safety, mostly posted on Instagram. As noted by Mele et al. (2023), such messages serve a pro-social purpose by informing travelers and residents about health threats, providing guidance for proactive action, and encouraging compliance with health guidelines.

3.4.3 Social Media Users' Reactions

Table 3.6 presents the number of followers for both the Brazilian and Portuguese organizations on social media platforms. Messages from the Portuguese DMO garnered an average of 2226.68 likes and 24.73 comments/replies per post, whereas those from the Brazilian DMO received an average of 514.71 likes and 15.18 comments/replies per post. These figures indicate a notable discrepancy in social media user engagement between the organizations, likely influenced by variations in their respective follower counts.

Table 3.6. Brazilian and Portugal social media platforms' follower base

Platform	@VisitBrasil	@VisitPortugal
Facebook	682.141	1.458.799
Instagram	115.000	621.000
Twitter	120.100	110.500
Total	917.241	2.190.299

* Data collected on January 10, 2022.

The data presented in Table 3.7 indicates that social media users exhibited varying reactions across different platforms. A notable difference in users' response scores was observed between Instagram and Facebook, as well as between Instagram and Twitter, in both destinations. Specifically, Instagram posts elicited a significantly higher interaction level than Facebook in Portugal (30 times) and Brazil (9 times), despite Facebook boasting a more extensive follower base. Possible factors contributing to this phenomenon include the richness of visual content, which has been shown to stimulate imagination and emotions, particularly in image repair responses (Pachucki et al., 2022). Interestingly, despite boasting more messages, Twitter exhibited lower average user reactions, with 37.9 likes per tweet in Brazil and 35.5 in Portugal. These findings suggest

a higher level of engagement and loyalty on Facebook and Instagram than on Twitter, as Hays et al. (2013) suggested.

Nonetheless, on both DMOs' Instagram accounts, non-crisis messages received a greater number of reactions compared to crisis-related messages. Conversely, Facebook and Twitter demonstrated higher engagement with pandemic-related messages. These findings suggest that Facebook and Twitter are more effective platforms for destinations to disseminate information about a crisis than Instagram, aligning with previous research in crisis communication (e.g., Barbe et al., 2018; Huertas et al., 2020; Kwok et al., 2022).

Table 3.7. The average number of reactions generated by social media users.

Content of Message	Brazil						Portugal					
	Facebook		Instagram		Twitter		Facebook		Instagram		Twitter	
	Like	Comment	Like	Comment	Like	Reply	Like	Comment	Like	Comment	Like	Reply
Objective of the message												
Crisis-related message	76	4	599	14	41	5	331	21	8892	89	36	1
Non-crisis message	144	14	1648	30	38	4	309	14	9515	91	32	1
Type of Message												
Call to Action	58	14	-	-	-	-	307	14	9857	108	28	-
Customer Service	-	-	1441	36	-	-	-	-	-	-	26	1
General	246	15	2061	31	53	7	151	7	8522	69	45	2
Information	90	5	1072	25	28	7	346	18	7338	85	38	1
Promotion	137	12	1346	25	42	3	310	15	9536	89	34	1
Crisis Communication Strategy												
Adjusting Information	-	-	-	-	-	-	211	11	9744	149	25	1
Instructing Information	73	7	360	13	28	2	353	20	7750	85	38	1
Reputation Repair	76	4	580	13	53	7	348	23	9573	79	37	1
Response Strategy												
Distraction	84	4	360	10	-	-	426	21	-	-	22	-
Enhancing	-	-	-	-	-	-	163	8	-	-	44	1
Renewal	-	-	-	-	-	-	296	26	9116	70	46	2
Transferring	-	-	-	-	-	-	528	34	-	-	44	1
Victimage	51	1	1348	22	53	7	388	37	10316	93	24	1

Concerning the type of message, notably, promotional content did not receive the highest level of attention, suggesting a shift in consumer preferences during crises, as noted by Pachucki et al. (2022). According to Kwok et al. (2022), the findings imply that organizations cannot solely utilize social media for marketing purposes. Across platforms, the most engaging posts from Brazil's DMO were General posts, highlighting user preferences and potential disparities between posted content and audience perception, as Huertas and Marine-Roig (2015) discussed. Conversely, in Portuguese social media, call-to-action posts garnered the highest average of "likes" and "comments." These findings indicate that this type of message is more interactive as it directly solicits participation from social media users, aligning with previous studies (e.g., Hays et al., 2013; Minazzi, 2015).

Social media users' reactions exhibited variability in response to crisis communication strategies, with Brazil and Portugal's Reputation Repair and Portugal's Adjusting Information garnering favor. These findings indicate that audiences may not be inclined toward technical information about COVID-19 when engaging with DMOs' social media platforms. Furthermore, it implies that messages offering emotional support play a vital role during recovery. However, these results diverge from other studies (e.g., Barbe et al., 2018; Huertas et al., 2020; Kwok et al., 2022), which suggest that tourists expect to find crisis information on destinations' online channels.

Regarding the reputation repair response, Victimization emerged as the type of crisis-related message that garnered more attention from Instagram users on both DMOs. This outcome suggests that the audience displayed sympathy toward the plight of the affected parties, recognizing themselves as potential victims and resonating with the emotional messaging. Additionally, a Renewal response was prominent on Portugal DMO's Instagram and Twitter platforms, while Transferring and Distraction strategies captured users' attention on Facebook.

These findings support Kwok et al.'s (2022) research, which suggests that internet users process information differently based on the unique information cues associated with the medium conveying the information.

3.5. Tourist Destination's Communication Strategies on Social Media Framework

The present research findings delineate a collection of novel best practices for crisis communication and reputation management via social media platforms during prolonged crises. Consequently, this research furnishes a framework and specific recommendations for destination management organizations' responses to crises, amalgamating crisis communication strategies, message types, social media platforms, and media formats (Table 3.8).

An efficacious response to the crisis initially entails a combination of instructional measures and adaptive dissemination of information (Zizka & Chen, 2023). This communicative approach aligns with the principles espoused by Coombs (2007), advocating for addressing affected individuals' immediate physical and psychological needs before attending to the organizational reputation.

Table 3.8. Destination management organizations' crisis communication framework

Crisis Communication Strategy	Type of Message				Social Media Platform				Media Type		
	Promotion	Information	Customer Service	Call to Action	General	Facebook	Instagram	Twitter	Text	Visual	Link
Instructing information											
Technical information		✓	✓			✓		✓	✓		✓
Adjusting information											
Emotional					✓		✓		✓	✓	
Corrective action	✓	✓	✓					✓	✓		✓
Reputation repair											
Distraction	✓	✓		✓		✓	✓	✓	✓	✓	✓
Enhancing	✓	✓				✓		✓	✓		✓
Renewal	✓			✓			✓		✓	✓	
Transferring	✓	✓				✓		✓	✓		✓
Victimization					✓	✓	✓	✓	✓	✓	

During the emergent phase of a crisis, delivering instructional information is crucial for ensuring tourist safety, keeping them informed of ongoing developments, offering guidance on protective measures, and addressing their inquiries. This requires rapid response and a continuous flow of information. Twitter, followed by Facebook, serves as the primary channel for crisis communication. Messaging strategies should be consistently presented in textual formats and may include hyperlinks directing users to official crisis management authorities. Additionally, as highlighted by recent studies (e.g., Li et al., 2022; Pachucki et al., 2022), DMOs are advised to avoid sharing negative content on social media and refrain from disclosing specific crisis statistics, such as infection rates and mortality figures.

Beyond providing instructional information, emotional support is essential during crises, as individuals are often vulnerable to psychological distress. Consequently, prior research (e.g., Li et al., 2022; Pachucki et al., 2022) recommends that DMOs enhance the distribution of emotionally resonant content and offer consumer support through social media platforms. For example, the Portuguese DMO has introduced a content series titled "Can't Skip Hope," which encourages refraining from travel at present while fostering optimism for future travel opportunities. This communication prominently features greetings and inspirational messages, particularly on Instagram, utilizing the platform's visual appeal to evoke positive emotions among consumers.

In addition, organizations must demonstrate a commitment to rehabilitation by implementing strategies to address and resolve the root causes of the crisis, thereby reassuring stakeholders. Key messaging strategies include promoting destination safety, disseminating information on corrective actions, and offering customer service to respond to user inquiries about these measures. For instance, the Portuguese DMO has launched the "Clean and Safe" certification to ensure safety in response to COVID-19,

facilitating the eventual resumption of tourism activities. Twitter is utilized as the primary platform for disseminating these messages, given its effectiveness in providing immediate and real-time updates during crises, as emphasized by Sigala (2011).

During crisis times, destination organizations face a delicate balance between refraining from using social media for promotional purposes that encourage visitation while maintaining communication to prevent their brand from fading from the audience's consciousness. Given this, five strategies for repairing a tourist destination's reputation were proposed: Distraction, Enhancing, Renewal, Transferring, and Victimization.

Among these strategies, the distraction approach assumes particular significance in providing social media users with avenues to escape from the harsh realities of the crisis momentarily. Organizations can contribute by offering entertainment and immersive experiences. For instance, promotional messages may feature depictions of regional delicacies, local legends and stories alongside links to websites providing virtual tour experiences. Liu-Lastres (2022) suggests that leveraging innovations in artificial intelligence and virtual reality can further enhance the efficacy of this strategy. Additionally, organizations may utilize factual information and call-to-action messages to engage and divert the audience's attention during the crisis. This strategy can be implemented across all three major social media platforms, focusing on delivering visually compelling content to captivate users' interest.

The Enhancing and Transferring strategies are essential tools for rebuilding a destination's image by reinforcing perceptions of its safety and credibility. These strategies can be effectively combined: the Enhancing strategy focuses on highlighting the current positive initiatives undertaken by the DMO, while the Transferring strategy involves leveraging endorsements from reputable third parties to lend credibility to the organization. Both strategies prioritize the promotion of destination safety and the dissemination of factual information, primarily communicated through textual messages on platforms such as Facebook and Twitter and supplemented with relevant links.

In addition to the aforementioned approaches, the Renewal strategy plays a critical role in preparing the audience for the eventual resurgence of tourism activities post-crisis, fostering an optimistic outlook for the future. Renewal initiatives involve clearly communicating the organization's forward trajectory (Ulmer et al., 2007). For example, the Portuguese DMO has provided comprehensive guides to potential destinations for the post-lockdown period. These response strategies are consistent with previous research (e.g., Huertas et al., 2020; Avraham, 2021), which highlights the importance of

optimistic rhetoric and proactive measures in facilitating the recovery of a destination's image. Promotional messages and calls-to-action are essential in capturing audience attention, with Instagram proving particularly effective due to its visual-centric nature.

Despite the extensive literature on social media crisis communication (e.g., Li et al., 2022; Pasquinelli et al., 2022), which indicates that destination organizations have moved beyond reactive strategies and ad hoc responses, the Victimization strategy remains significant due to its effectiveness in capturing users' attention. This strategy involves disseminating emotionally charged messages that portray the organization as a victim of the crisis, alongside its stakeholders. Instagram is particularly utilized as a platform where visual resources are leveraged to execute reputation management efforts.

These strategies offer a comprehensive approach for destination management organizations to effectively navigate crisis communication on social media platforms. Table 3.9 outlines the proposed responses for each crisis communication strategy for destination management organizations on social media, accompanied by an illustrative example based on Portugal's DMO message.

Table 3.9. Response strategies and relevant practical implications

Crisis Communication Strategy	Practical Implication	Platform	Example from @VisitPortugal
Instruction Information	Provide updates on safety measures and resources, linking to official crisis management authorities for reliable information during a crisis.	Twitter, Facebook	Twitter on 05/26/2021: "Rules for Madeira and Azores are different for continental Portugal, please see all information provided here https://bit.ly/3fbhVlc "
Emotional Support	Share emotionally resonant content and inspirational messages and provide consumer assistance.	Instagram	Instagram on 03/24/2020: "Can't Skip Hope. It's time to stop. Time to reset, time to recenter, time to switch off so we can move on. The best part of it all? We are in this together. ❤️ #CantSkipHope"
Corrective Action	Promote destination safety, share corrective measures, and address user inquiries to rebuild stakeholder trust and confidence.	Twitter, Facebook	Twitter on /06/092020: "Clean & Safe platform just launched https://portugalcleanandsafe.com Identifying tourist companies committing to comply w/ hygiene & health safety requirements. We want to make sure your stay is safe & unforgettable. Enjoy #Portugal and all its beauty in safety. #CleanAndSafe #SafeTravels."
Distraction	Provide escapism through entertainment, immersive experiences, and virtual tours.	Facebook, Instagram, Twitter	Twitter on 03/20/2020: "#Porto: #Cultural #suggestions without leaving the house https://bit.ly/2QwsnqM via @visitporto "It is possible to embark on a 360° #virtual tour, without leaving the comfort and #safety of your home, to the following places ;) "#CantSkipHope #Stayhome #dreamnowvisitlater"
Enhancing	Highlight current positive actions, promote destination safety, and disseminate factual information with relevant links.	Facebook, Twitter	Facebook on 06/03/2020: "4 destinations in #Portugal are ranked among the top 10 Safest Destinations to visit in #Europe, as selected by European Best Destinations #4 Madeira, #5 Azores, #7 Alentejo and #10 Algarve #CantSkipHope #EuropeanBestDestinations #SafeTravel #Summer2020"
Transferring	Connect reputable organizations or individuals to bolster the destination's credibility.	Facebook, Twitter	Twitter on 05/28/2020: "#Portugal one of first destinations to receive @WTTC's Global Safety Stamp https://bit.ly/2ZJYN6A "This stamp, together with our "Clean & Safe" program, is one step further in reassuring that we care, our destination is focused on recovery, and trust" #CantSkipHope #SafeTravels"
Renewal	Prepare the audience for the post-crisis tourism resurgence with optimistic rhetoric.	Instagram	Instagram on 02/08/2021: "Sintra's coastline is incredible and a popular spot with the locals. Praia da Urso is a little remote and involves a slow trek down to the beach, but totally worth a visit. Perhaps an interesting plan for post-lockdown? ;) [Photo: @pedro.f.jorge] #CantSkipTomorrow #LisbonRegion"
Victimization	Position the organization as a crisis victim alongside stakeholders, disseminating emotional messages to garner attention and engender empathy.	Instagram	Instagram on 12/31/2020: It has been a challenging year, but here we are, with our eyes set on tomorrow, and knowing for sure that the best is yet to come. Happy New Year! #CantSkipTomorrow

3.6. Conclusion

During an examination spanning 16 months amid the COVID-19 pandemic, an analysis of official communications from two destination management organizations (DMOs) across three disparate social media platforms revealed a discernible evolution in communication methodologies and image management, notably marked by the adoption of strategies aligned with Situational Crisis Communication Theory (SCCT).

Evidently, the DMOs of Brazil and Portugal exhibit notable disparities in their utilization of social media during the COVID-19 crisis. This observation aligns with the conclusions drawn by Hays et al. (2013), who assert that DMOs implement diverse engagement strategies within digital communities, thereby highlighting global discrepancies. Despite an initial surge in social media engagement, the Brazilian DMO witnessed a subsequent wane in sustained interest, suggesting a lack of responsiveness to the crisis. In contrast, the Portuguese DMO demonstrated a methodical and efficacious crisis management strategy, surpassing its Brazilian counterpart by a notable factor 17.

The types of messages used by DMOs were classified into five categories: Promotion, Information, Customer Service, Call to Action, and General. Promotion and Information stand up in both countries. However, notable differences in content strategy emerged, delineating the Brazilian DMO's emphasis on destination promotion from Portugal's organization, which steered away from product-centric messaging. The Portuguese organization predominantly underscored the destination's safety, striving to persuade consumers of its status as a secure and hospitable place to visit. These findings are consistent with existing literature (Tuclea et al., 2020; Joseph & Anandkumar, 2021), underscoring the influential role of communicating destination safety on social media platforms in significantly bolstering tourism recovery efforts. These strategies, deemed effective by their widespread public embrace, underscored Portugal's adaptive and comprehensive response to the challenges posed by the pandemic.

In addition, this study sought to outline effective social media communication strategies for DMOs amid extended crises and appraise their effectiveness in generating favorable outcomes. While Instruction and Adjusting Information from SCCT emerged as pivotal strategies, Reputation Repair responses were not identified as per the standard recommendations by Coombs (2007). Our findings elucidate five response strategies — Distraction, Enhancing, Renewal, Transferring, and Victimization — utilized by destination organizations to cultivate public appreciation and augment the efficacy of crisis communication efforts on social media platforms.

Concluding, unlike most studies on tourism recovery, which predominantly focus on singular social media platforms such as Facebook and Twitter, this study adopts a broader perspective. It scrutinizes destination organizations' messaging and engagement strategies across three distinct social media platforms — Facebook, Twitter, and Instagram. The results enabled us to identify the differences between social media platforms—crisis communication distribution varied by digital platform, with Instagram and Twitter serving distinct purposes. Due to its visual appeal, Instagram garnered more engagement, while Twitter was used for crisis information and public support. Facebook demonstrated multifunctionality, encompassing crisis information and image repair (Ketter, 2016).

Based on these findings, the study provides recommendations for destination organizations on designing effective social media content during crises. These results and reflections can be used to prepare for the possible next crisis. Our analysis reveals valuable insights that significantly contribute to theory and practices.

3.6.1 Theoretical Contributions

This study has provided significant theoretical insights into social media communication within the framework of prolonged crises. Initially, through a comprehensive literature review, the research introduces a conceptual model to assess the appropriateness of destination management organizations' communication strategies on social media platforms during crises, incorporating communication characteristics, content nature, and user reactions. Subsequently, the investigation examines and elaborates upon this model, proposing a practical communication framework explicitly tailored to DMOs. The model, successfully applied to two distinct tourist destinations across three digital platforms, demonstrates its generalizability across diverse cultural, social, and economic contexts. This broad applicability makes it a valuable tool for researchers and practitioners alike.

Secondly, the study explored the SCCT to broaden its scope, aiming to encompass the distinct dynamics of social networks and communication strategies utilized by tourist destinations amidst prolonged crises. The emergence of the COVID-19 pandemic has introduced unprecedented challenges to the global tourism industry. Consequently, organizations have been compelled to develop adaptive strategies to navigate the profound repercussions of this crisis, leading to a discernible evolution in crisis communication methodologies. Nevertheless, the extant SCCT framework has proven inadequate in encapsulating the proactive measures undertaken by DMOs to address this

crisis, particularly through the lens of social media platforms. Considering this endeavor, the SCCT framework was expanded to incorporate five distinct Reputation Repair responses: Distraction, Enhancing, Renewal, Transferring, and Victimization. As this study delineates, introducing these innovative strategies holds considerable promise in guiding future research endeavors within analogous contexts. The Distraction strategy emerges as particularly noteworthy amid the COVID-19 pandemic, as it has not been previously expounded upon in extant models. This observation aligns with findings from other studies indicating that the pandemic necessitated an adaptation of content to evoke positive consumer emotions, exemplified by a reduction in marketing-centric messages about company products and amplification of emotionally resonant content (e.g., Aguado-Correa et al., 2022; Gonzalez et al., 2021). Furthermore, the investigation underscores the Renewal strategy as a viable response, following the previous literature that discusses industry restructuring and brand repositioning as pivotal shifts toward more sustainable paradigms (Muritala et al., 2022; Pasquinelli et al., 2022).

Thirdly, this research is the first attempt to address the urgent need to identify effective communication strategies for DMOs in a long-term crisis. A contributive framework for practical communication was developed by linking different digital platforms, crisis communication strategies, message typologies, and media resources. This framework enhances scholarly comprehension regarding DMOs' social media responses and image management during crises and aids in formulating tailored messages for each stakeholder cluster.

Finally, this study adeptly addresses several research lacunes identified in prior literature, notably encompassing longitudinal (Avraham, 2021), cross-national (Aguado-Correa et al., 2022), and DMOs studies concerning crisis communication within the tourism sector (Zhai et al., 2019). By providing a comprehensive examination of diverse communication executions and strategies during crisis periods, it significantly enriches the existing body of knowledge. Consequently, it bridges the divide between crisis communication theories and social media communication practices tailored for destination management organizations.

3.6.2 Practical Implications

This investigation facilitates the advancement of several actionable recommendations in crisis communication for practitioners within destination organizations. First, the study highlights the critical significance of leveraging social media as a communication tool during protracted health crises, accentuating its interactive potential and the perils

linked to overlooking communication amidst uncertainty. It serves as a model for destination organizations, drawing insights from the experience of Portugal's DMO, which exhibited significant recovery attributed to skilful image management. A key concept that has emerged in this study is the imperative for DMOs to transition away from reactive strategies and ad hoc responses toward a more innovative and emotionally driven planning approach. Second, this document provides a valuable framework that amalgamates crisis communication strategies, message types, social media platforms, and media formats. It offers specific recommendations for DMOs concerning crisis communication and reputation management via social media platforms during prolonged crises, advocating for a shift in focus toward responsive strategies of destination organizations. Ultimately, the study emphasizes that success on social media during crises is not solely determined by organizational messages but by understanding and addressing the public's needs. This offers guidance to organizations on the types of messages and platforms most valued by the public, thereby providing valuable insights for effective tourist destination communication.

3.6.3 Limitations and Future Research

While this study makes several valuable contributions, it also exhibits certain limitations that could inform future research endeavors: 1) The study was conducted over a specific and relatively short timeframe. Extending the analysis period would yield a more comprehensive dataset, thereby enhancing the precision of both theoretical exploration and empirical findings. 2) the study's sample size is restricted to two tourist destinations. Encompassing a more comprehensive geographical coverage would offer a diverse array of cases, thereby providing a more comprehensive understanding of post-pandemic dynamics. 3) While the study focused on the three primary social media platforms, Facebook, Instagram, and Twitter, additional research is needed to evaluate the role and effectiveness of other social media platforms during extended crises. 4) Only the textual content of messages was analyzed, necessitating an examination of visual content, particularly on platforms like Instagram, where textual messages are short and often accompanied by visual graphic resources. 5) The analysis solely focused on crisis communication strategies and the structure of public messages on social media during a crisis. Future research could explore the projection of destination image during the crisis, comparing pre- and post-crisis phases. 6) User reactions on social media were quantified solely by the number of "likes" and "comments". However, analyzing users' comments and emotions regarding the messages disseminated by organizations during crises would be essential to understanding public sentiment better.

Chapter 4 - Analyzing Digital Public Behavior in Response to Destination Management Organizations' Social Media Communications During a Crisis

This chapter presents the third study of this thesis, which aims to analyze the behavior of the digital public in response to the communications from destination management organizations (DMOs) on social media during a crisis. The study examined 20,029 user comments on 1,611 posts from DMOs in Brazil and Portugal across Facebook, Twitter, and Instagram between March 2020 and June 2021. Utilizing natural language processing (NLP) tools, supported by sentiment analysis, correspondence analysis, Robust ANOVA, and word frequency analysis, the research sought to uncover trends and patterns. The principal findings indicate a prevalence of positive comments on Instagram, highlighting its effectiveness in managing the image of tourist destinations during a crisis. Additionally, the results reveal a significant association between promotional and general messages and positive sentiments, underscoring the importance of engaging, inspirational, and emotional content for organizational communication during the pandemic. Furthermore, the study found that the public exhibited a low perception of risk on social media platforms, reinforcing that DMO communications foster positive emotions and enhance tourist satisfaction. The insights derived from this research offer valuable contributions not only to the deeper understanding of consumer behavior on social media but also to tourism destinations, bolstering their digital presence during crises, maintaining user relationships, and enhancing brand visibility.

4.1. Introduction

Contemporary research (e.g., Joseph & Anandkumar, 2021; Pachucki et al., 2022; Pasquinelli et al., 2022) underscored the increasing significance of social media for destinations during the COVID-19 pandemic. During this period, DMOs markedly intensified their efforts to engage with consumers, enhance their market positioning, and influence travelers' decision-making processes. Effective communication in a crisis context necessitates meticulous management of social media activities and interactions. Obembe et al. (2021) identify a crucial area of interest in crisis communication

scholarship as the utilization of dialogic communication approaches by organizations when interacting with key stakeholders on social media platforms.

Li et al. (2019) note that individuals utilize social media during emergencies for diverse purposes, including seeking information, connecting with others, or as a means of distraction to alleviate tension and uncertainty (Li et al., 2019; Spence et al., 2015; Wang et al., 2024). Lenggogeni et al. (2022) emphasize that crises significantly affect tourists' emotions, underscoring the necessity for DMOs to carefully evaluate their communication strategies to avoid inciting negative emotions and exacerbating the public's perception of risk. Despite this, the existing literature on crisis management and tourism disasters has largely overlooked the various coping strategies employed by destinations and the public's responses to these strategies (Lenggogeni et al., 2022).

User engagement on social media can indicate the public's alignment with an organization's communication efforts. Nonetheless, current research on social media management falls short of providing definitive insights into the added value of social media for achieving organizational objectives. This limitation arises because existing studies predominantly focus on quantifying visibility through metrics such as "likes" and "shares" rather than examining their impact on public behaviors and attitudes (DiStaso et al., 2011; Valentini, 2015). Additionally, Taecharunroj and Pattaratanakun (2023) highlight a notable gap in the literature regarding analyzing emotional content in posts produced by DMOs.

A potential approach to addressing this issue is to analyze user comments on organizational communications. Comments on social media posts provide unstructured data that, when processed and classified, can serve as a valuable tool for assessing performance indicators (Guedes & Gosling, 2023). Despite advancements in data analysis techniques, the body of academic research focusing on comments on organizations' social media posts remains relatively limited (e.g., Guedes & Gosling, 2023; Shin et al., 2023; Taecharunroj & Pattaratanakun, 2023).

The vast amounts of data generated by social media present a valuable opportunity for extracting significant insights (Ragini et al., 2018). Sharda et al. (2014) highlight that leveraging publicly available online data for research purposes can substantially reduce the costs, effort, and time associated with conducting large-scale public opinion surveys. Twitter, today known as X, is the most frequently used platform for sentiment analysis, with Drus and Khali (2019) noting that 85% of reviewed studies utilize Twitter for data collection due to its extensive availability, accessibility, and richness of content (Obembe

et al., 2021). However, the content across different social media platforms varies, suggesting that exploring additional sources could yield new insights and findings (Drus & Khali, 2019).

To address these gaps, this study aims to analyze public behavior in response to the communication efforts of tourism management organizations across multiple social media platforms during the COVID-19 pandemic. This analysis seeks to elucidate user behavior patterns on social media in crisis contexts and to develop improved communication strategies for DMOs during such crises.

To achieve this objective, the study examines the marketing communications of two DMOs from Brazil and Portugal across three digital platforms—Facebook, Instagram, and Twitter—during the pandemic. Natural language processing (NLP) techniques were employed to identify the sentiments (positive, neutral, and negative) and to analyze terms from user comments on the DMOs' social media pages. This approach enables a comprehensive understanding of public perceptions of the crisis.

This research differs from others by analyzing not only the DMOs' posts shared on social media platforms but also users' comments. While commenting is considered the most impactful form of engagement due to the greater time investment it requires (Mariani et al., 2016), existing research often focuses on quantitative metrics, overlooking their influence on public behaviors and attitudes (DiStaso et al., 2011; Valentini, 2015).

The study is structured into five sections. The introduction is presented first, followed by a literature review in the second section. The third section presents the research methods used in the study, including the content analysis model and sentiment analysis. Subsequently, the findings were discussed. Finally, the paper concludes by presenting the theoretical and managerial implications of the findings, along with the study's limitations and recommendations for future research.

4.2. Theoretical Background

4.2.1. Social Media Communication and Risk Perception During COVID-19

Crises are intrinsic to the tourism industry, introducing uncertainty, disruption, and change that threaten organizations and stakeholders (Taecharungroj & Pattaratanakun, 2023). The COVID-19 pandemic, which emerged in 2020, represents an unprecedented

shock that has dramatically reshaped the global tourism landscape, necessitating public interventions and modifications in national tourism strategies worldwide (Pasquinelli et al., 2022). Sigala (2020) notes that the pandemic differs from other crises' life cycles, nature, impacts, and policy responses, including lockdowns and travel restrictions designed to curb disease spread. These government measures severely affected tourism, confining previously active travelers to their homes and generating negative emotions and stress (Lenggogeni et al., 2022).

Literature (e.g., Hugo & Miller, 2017; Muritala et al., 2022; Obembe et al., 2021; Schroeder et al., 2018) highlights a variety of factors contribute to the diversity in tourist behavior, including the influence of external actors on public sentiment, opinion, risk perception, and decision-making. These factors include governmental public interventions in response to the pandemic and the role of mass media. According to Spence et al. (2015), individuals typically process risk information quickly and subjectively, leading to an amplified perception of risk. This heightened risk perception, in turn, significantly impacts tourists' intentions to visit a destination (Schroeder et al., 2018).

Risk perceptions shape individuals' judgments and threat assessments, potentially hindering public compliance and response to information received (Lohiniva et al., 2020). Given this, understanding the public's risk perceptions is crucial for an organization's preparedness and recovery in a crisis. The literature reveals several dimensions of perceived risk during the COVID-19 pandemic. For instance, Carvache-Franco et al. (2022) identified vital discussion topics on Twitter regarding the pandemic and the associated risk perceptions of the digital public, categorizing into six main axes: economic, social, health, work, family, and government.

In this context, effective DMOs can mitigate these external factors by restoring consumer confidence and enhancing relationships through targeted social media communication (Barbe et al., 2018; Oliveira & Huertas, 2019; Taecharungroj & Pattaratanakun, 2023). Avraham (2021) highlights that robust marketing and communication strategies are particularly critical during a crisis, as they protect the destination's reputation, sustain tourist flow, and strengthen stakeholder relationships.

Social media has been instrumental in communication throughout the COVID-19 pandemic, mainly owing to its capacity to reach extensive audiences in real time (Pachucki et al., 2022). Kwok et al. (2021) found that during the pandemic, individuals were more attentive to crisis-related messages on platforms such as Facebook and

Twitter compared to other types of content. Furthermore, users actively engaged with these messages by commenting on and sharing them, amplifying their reach and impact.

In response to the pandemic, DMOs adjusted their communication strategies to navigate the crisis effectively (Ketter & Avraham, 2021). These adjustments significantly impacted the destination's awareness, image, and perceived safety (Taecharungroj & Pattaratanakun, 2023). The DMOs' messages, which blended factual information, opinions, and emotional appeals, were designed to align with their core principles and engage social media users (Molina et al., 2020). Pasquinelli and Trunfio (2021) found that such effective communication not only reassured tourists about safety and preparedness but also strengthened emotional connections and encouraged positive behaviors.

4.2.2. User Reactions and Interactivity

The advent of social media has profoundly transformed how organizations interact with stakeholders (Barbe & Pennington-Gray, 2020; Kaplan & Haenlein, 2010). Obembe et al. (2021) highlight that social media offers organizations a cost-effective platform for active engagement and relationship-building with stakeholders, enabling immediate access to real-time data generated by these stakeholders.

The Social-Mediated Crisis Communication (SMCC) model posits that crisis communications disseminated through social media can elicit varied responses, influenced by factors such as the medium used, the nature of the crisis, and the emotional state of individuals (Utz et al., 2013). Nonetheless, Carvache-Franco et al. (2022) note that the impact of social media crisis communication from the receiver's perspective remains underexplored in the literature. Thus, analyzing online dialogues could enhance understanding and improve organizational communication strategies during a crisis.

SMCC identifies three primary categories of stakeholders involved in information exchange before, during, and after a crisis: influential social media creators who generate crisis-related content for others; social media followers who actively consume this information; and social media "inactives," who may indirectly receive the information through electronic word-of-mouth (E-WOM) or traditional media channels that reference social media content (Austin et al., 2012). Therefore, audiences vary in engagement levels, with many observing passively while only a few actively contribute content. In this context, social media platforms rely heavily on users who not only seek

information but also engage in content creation and sharing (Gretzel & Yoo, 2017; Yoo & Gretzel, 2011).

Conversely, the rapid information dissemination on social media presents new challenges for organizations, as it enables customers and stakeholders to broadcast their perceptions and demands to a broad audience, potentially jeopardizing the organization's image. Empowered stakeholders on social media platforms have the capability to exacerbate existing crises or even trigger new ones, often with limited control from the organization over the content generated by these external parties (Cheng, 2020; Zhai et al., 2020). Coombs (2007) notes that stakeholders' increased attribution of crisis responsibility can lead to emotional reactions, such as anger towards the organization. Such negative emotions can drive unfavorable behavior, including negative E-WOM, adversely affecting the organization's reputation (Utz et al., 2013).

However, according to Brodie et al. (2011), customer engagement is indicative of the psychological states of consumers during their interactive experiences with a specific brand, product, or company within a service relationship. Positive experiences can enhance online engagement, potentially alleviating negative sentiments towards a destination in crisis and positively impacting recommendations (Wang et al., 2019).

Liu et al. (2011) highlight that crisis events often evoke strong emotional responses from affected people, and online social channels can serve as valuable platforms for providing emotional support or expressing frustrations. The authors emphasize that primary audiences, who are directly impacted by the crisis, share a vested interest in seeing the issue resolved and have long-term stakes in the reputation and operations of the organization. Consequently, emotional involvement has become a crucial focus in crisis communication research and practice, particularly regarding how individuals' emotions influence their cognitive processing of information, as well as their attitudes and behaviors towards the organizations involved (Lu & Huang, 2024).

The Media Dependency Theory posits that individuals rely on media for various needs, and the greater the media's ability to fulfill these needs and expectations, the more central it becomes in user life (Spence et al., 2015). Wang et al. (2024) note that with the widespread use of mobile social networks, people increasingly rely on these platforms to exchange information, making them vital for communication in crisis situations. Li et al. (2019) highlight that individuals use social media during emergencies for a diverse array of purposes. Users often turn to media for essential information that provides satisfaction, comfort, and helps achieve specific goals, such as alleviating tension and

uncertainty (Li et al., 2019; Spence et al., 2015; Wang et al., 2024). Additionally, reliance on social media can benefit users who lack social support by mitigating the crisis's negative psychological impacts and fostering external relationships, thereby enhancing user satisfaction through an immersive experience (Zhang et al., 2022). Azer et al. (2021) explain that during the COVID-19 pandemic, social media served as a refuge from the harsh realities users face.

Interactivity on social media reflects how users actively engage with content or promotional materials on the platform (Minazzi, 2015). Research (e.g., Hays et al., 2013; Huertas & Marine-Roig, 2015) has identified that certain aspects of interactivity, particularly user reactions such as likes, comments, and shares, serve as critical indicators on online social platforms. These metrics represent automatic ways for users to express their preferences and opinions within the network.

According to Minazzi (2015), online comments have become crucial in the decision-making processes of both consumers and organizations. For organizations, these comments offer insights into how the public perceives their brand. For consumers, recommendations and reviews help in identifying products and services that best meet their needs, influencing their intentions to engage or visit. Feedback from users serves as a valuable resource for refining product designs and marketing strategies (Leung et al., 2013). Analyzing this data enables a better understanding of user needs and behaviors about an organization's communication.

4.2.3. DMO-Generated Content and Social Media Platform

Kaplan and Haenlein (2010) emphasize that selecting social media platforms is crucial in formulating effective strategies. This choice should be guided by the target audience and the nature of the message to be conveyed. In alignment with this perspective, Huertas and Marine-Roig (2016) argue that managers need to recognize the distinct capabilities and potentials of various social media platforms. Consequently, they should tailor their content and communication strategies to specific platforms rather than attempting to maintain a uniform presence across all available channels.

According to the literature (e.g., Drus & Khali, 2019; Minazzi, 2015;), social media platforms can be categorized into four types based on their functionalities: (i) Content communities: These platforms are designed for sharing and interacting with media content such as videos, audio, images, and comments. Users can express their sentiments and opinions through these channels (e.g., YouTube, Instagram); (ii) Social networking:

These platforms focus on building community networks, personalizing user profiles, and connecting with friends, colleagues, and family members (e.g., Facebook, LinkedIn); (iii) Blogs: These are platforms used to communicate around shared interests or specific purposes, often involving longer-form content and discussions (e.g., Reddit, Quora); and (iv) Micro-blogs: These platforms allow users to share brief, real-time updates and information with their network of followers or the public (e.g., Twitter, Tumblr). Kotler et al. (2012) categorize social media into two main groups: 1) Expressive media: These platforms emphasize personal expression and individual opinions. Examples include Facebook, Twitter, Instagram, YouTube, and Snapchat. 2) Collaborative media: These platforms facilitate the collective creation and sharing of information among users such as TripAdvisor, Wikipedia, and Airbnb.

According to Carvache-Franco et al. (2022), Twitter emerged as a primary channel for crisis communication during the COVID-19 pandemic, playing a critical role in mitigating negative perceptions and the adverse impacts of tourism crises on organizations and destinations. The platform has acted as a vital information hub, facilitating dialogue and immediate reactions during crises. Spence et al. (2015) underscore Twitter's value in providing information and enabling dialogic communication with individuals affected by the event. However, they express concerns about the platform's potential to spread misinformation through rapidly disseminating content. Triantafyllidou and Yannas (2020) highlight that Twitter has proven more effective than Facebook and Instagram in restoring a company's reputation post-crisis, enhancing behavioral intentions, and fostering positive engagement.

However, it remains unclear whether these patterns are observed during crises within the tourism industry. Corrêa et al. (2024) argue that social media function for the tourism industry in a crisis context not only as a tool for disseminating information during tourism crises but also for engaging in promotional activities, emotional engagement, persuasive communication, distraction tactics, analytical insights, and innovation initiatives. Thus, different social media platforms may serve as valuable resources for meeting public needs and providing effective responses in uncertain times.

According to Minazzi (2015), the content published on digital platforms is pivotal for user engagement, regardless of the platform type. Content is a central component of social media, significantly influencing individuals' decisions to join or follow a particular platform (Valentini, 2015). Thus, leveraging these media effectively requires communication strategies that precisely address the intended message (Huertas & Marine-Roig, 2016). These strategies should aim to inform and stimulate dialogue with

the audience, elicit their reactions, and foster emotional involvement (Huertas & Marine-Roig, 2015).

Hays et al. (2013) examined how DMOs utilize social media, identifying five distinct content types: customer service, promotional, contest-related, soliciting user-generated content, and informational. Minazzi (2015) suggests that an effective method for consistently generating innovative and engaging social media content is the "Call to Action," which involves creating specific events or promotions to encourage user participation and sharing of experiences.

Previous research on crisis communication (e.g., Avraham & Ketter, 2017; Barbe et al., 2018) indicates that DMOs typically focus their crisis responses on promotional messaging aimed at restoring the destination's image rather than providing instructional information. According to Barbe and Pennington-Gray (2018), organizations may avoid instructional communication during a crisis to prevent increasing tourists' perception of risk. For instance, Joseph and Anandkumar (2021) observed minimal content related to the COVID-19 pandemic on Instagram, potentially reflecting a strategy to mitigate the public's perception of risk.

Nevertheless, while previous literature offers actionable recommendations for crisis response teams, analyzing social media content can yield critical insights into audience needs and the adequacy of organizational responses (Spence et al., 2015). In this context, conducting a sentiment analysis of user-generated content related to a crisis on social media platforms can reveal the affected public's needs and evaluate how effectively organizations address these needs in their crisis communication strategies.

4.2.4. Sentiment Analysis

Over the past decade, there has been increasing interest in applying sentiment analysis to consumer responses during tourism crises, mainly through social media data, as illustrated in Table 4.1. Sentiment analysis, or opinion mining, is an NLP technique that integrates human emotional understanding with machine learning technology. This process automatically identifies and categorizes a text's emotional or opinionated content, determining its polarity as positive, negative, or neutral (Paltoglou & Thelwall, 2012). It can be applied to various subjects, including products, services, organizations, events, or topics (Saragih & Girsang, 2017). Sentiment analysis is pivotal for understanding public perceptions and supports informed decision-making.

Table 4.1. Summary of the literature related to sentiment analysis in the crisis context

Author	Title	Application	Crisis Context	Social Media
Gkritzali (2020)	Negative MWOM and value co-destruction during destination crises	Examined the impact of microblogging word of mouth through Twitter on value co-destruction for Athens as a tourism destination facing a sustained crisis.	Economic	Twitter
Yan et al. (2020)	Mining public sentiments and perspectives from geotagged social media data for appraising the post-earthquake recovery of tourism destinations	Appraised the post-disaster recovery of tourism destinations via mining people's sentiments and perspectives regarding recovery status through geotagged social media data	earthquakes	Twitter
Morgan et al. (2021)	Sport event and destination co-branding: Analysis of social media sentiment in an international, professional sport event crisis	Explored the social media UGC that was shared pre-, during and after the cancellation of an international sports event - the 2018 Margaret River Pro surfing competition.	Shark attacks	Twitter
Obembe et al. (2021)	Covid-19 and the tourism industry: An early stage sentiment analysis of the impact of social media and stakeholder communication	Explored the key factors that influence public sentiments during nascent periods of the crisis of COVID-19.	COVID-19	Twitter
Willson et al. (2021)	Twitter content analysis of the Australian bushfires disaster 2019-2020: futures implications	Explored the themes and nature of sentiment of Twitter content that discussed the Australian bushfire disaster 2019-2020 and its associated wildlife devastation, with considerations for the future of Australia's tourism industry.	bushfires	Twitter
Carvache-Franco et al. (2022)	Risk perception and crisis communication during the Covid-19 pandemic: Analysis based on Twitter hashtags	Examined the response strategies to crisis communication from companies and organizations during the COVID-19 pandemic regarding perceived risk and crisis through the main topics of discussion in Twitter hashtags about the COVID-19 pandemic.	COVID-19	Twitter
Chen et al. (2022)	Dire Straits: How tourists on the Diamond Princess cruise endured the COVID-19 crisis	Investigated how tourists onboard the Dimond Princess during her lockdown intuitively and affectively enact the scene of a health crisis in their concurrent discourses.	COVID-19	Twitter , Facebook
Li et al. (2022)	Eliciting positive emotion through strategic responses to COVID-19 crisis: Evidence from the tourism sector	Evaluated the synergistic effects of crisis response strategies and linguistic cues on consumers' positive emotional states	COVID-19	Twitter
Muritala et al. (2022)	#CoronavirusCruise: Impact and implications of the COVID-19 outbreaks on the perception of cruise tourism	Investigated the perception of cruising during these outbreaks by analyzing the tweets on cruising using NLP.	COVID-19	Twitter
Nadeau et al. (2022)	Tourism destination image resiliency during a pandemic as portrayed through emotions on Twitter	Assessed the projection of emotions among tourists to understand the extent of destination image resiliency while under considerable stress during the COVID-19 pandemic.	COVID-19	Twitter
Solazzo et al. (2022)	How to exploit Big Social Data in the COVID-19 Pandemic: the case of the Italian tourism industry	Demonstrated how a Smart Tourism Destination can tackle the consequences of the COVID-19 pandemic using smart and digital technologies such as Big Data and Analytics.	COVID-19	Twitter
Song et al. (2022)	Does hotel customer satisfaction change during COVID-19? A perspective from online reviews	Explored the difference between the influencing factors of customer satisfaction before and after the COVID-19 outbreak based on hotel online reviews.	COVID-19	Ctrip

Twitter emerged as the predominant social media platform for sentiment analysis due to its extensive accessibility and rich content (Drus & Khali, 2019). The research underscores Twitter's popularity for extracting sentiment data, attributed to its structured and readily available information (Obembe et al., 2021). In contrast, other social media platforms, such as Facebook and Instagram, receive comparatively less attention for sentiment analysis. Drus and Khali (2019) note that despite Facebook's vast user base, it is less favored for sentiment analysis due to the unstructured nature of its data, which complicates the analytical process. Nevertheless, exploring alternative social media platforms can yield new insights and expand the scope of sentiment analysis research.

Given this context, the present study aims to perform sentiment analysis across multiple social media platforms—specifically Facebook, Instagram, and Twitter—to evaluate user sentiments regarding DMOs' communications during the COVID-19 pandemic. As shown in Table 4.1, although there has been a significant increase in studies analyzing user sentiment on social media, this research fills a gap by applying sentiment analysis to a broader spectrum of platforms, thereby providing a more comprehensive understanding of user emotions and reactions.

4.3. Methodology

4.3.1. Research Questions

This research aims to analyze the public's online behavior concerning the communication strategies of destination management organizations (DMOs) on social media during the COVID-19 pandemic. The study seeks to address the following research questions:

RQ1: What were DMOs' online communication characteristics during the pandemic?

RQ2: What were the public's prevailing sentiments regarding destination communications during the pandemic?

RQ3: Do preferences for social media platforms vary significantly in the context of a crisis?

RQ4: How do different categories of online communication influence users' sentiments on social media?

RQ5: What impact has DMOs' communication on social media had on the public's perception of risk?

4.3.2. Research Setting

The research is situated within the context of the COVID-19 pandemic, which precipitated a prolonged crisis in the global tourism sector. Given the varied post-crisis recovery trajectories, Brazil and Portugal were chosen as focal points for the study. Portugal responded to the crisis by implementing several measures to contain its spread and mitigate its impacts on the tourism industry (Turismo de Portugal, 2020). Conversely, Brazil emerged as the second-worst-affected nation by the virus, as indicated by data from September 2020 (Johns Hopkins, 2020).

The significance of the tourism sector and its substantial contribution to Portugal's economic growth is well recognized. Portugal has played a prominent role on the global tourism stage, being named the best tourist destination in the world for three consecutive years (2017, 2018, 2019) (Turismo de Portugal, 2019) and ranking as the 12th most competitive in travel and tourism in 2019 (WTTC, 2019). Following the COVID-19 pandemic, international tourism in 2022 exceeded expectations due to strong pent-up demand and the lifting of travel restrictions in many countries. That year, Portugal welcomed 22.3 million tourists, double the number from 2021, although still below 2019 figures by 9.6% (INE, 2022). In contrast, Brazil, renowned for its rich and diverse natural attractions, encountered difficulties enhancing its international tourism appeal (UNWTO, 2019). Portugal's strategic initiatives and recognition as a premier tourist destination underscore its resilience, while Brazil grappled with a stagnation in international tourist arrivals and tourism revenues throughout 2019.

The research objectives included identifying content disparities across the two destinations in different development contexts in the tourism industry. According to Taecharungroj and Pattaratanakun (2023), there is a lack of comparative studies between countries, with most tourism studies focusing on one or just a few countries/destinations, which makes transnational research essential for defining tourism marketing strategies and designing content on digital platforms.

4.3.3. Data Collection

Facebook, Instagram, and Twitter social media platforms were explored due to their substantial audience, organizational engagement, and the availability of publicly accessible data (Barbe & Pennington-Gray, 2018; Huertas & Oliveira, 2019; Huertas et

al., 2020; Ketter, 2016; Mariani et al., 2016). Data spanning 16 months, from March 1, 2020, to June 30, 2021, was gathered for analysis, considering the global escalation of the pandemic from February 2020 and its subsequent subsiding by June 2021 (WHO, 2020; UNWTO, 2022).

The NCapture software, in conjunction with manual methods, was used to collect 3058 messages from the official profiles responsible for destinations' international promotion, specifically "@VisitBrasil", managed by Embratur; and "@VisitPortugal", managed by Turismo de Portugal. The analysis focused on English messages, comprising 1,611 messages - 91 from Brazil and 1,520 from Portugal.

Brazil and Portugal's DMOs presented social media activity during the pandemic period. Remarkably, the Portuguese organization demonstrated considerably higher activity levels compared to its Brazilian counterpart, illustrating a seventeen-fold difference in publication frequency. The Brazilian DMO experienced interruptions in communication during the latter half of 2020, with resumed activity only in July 2021. This fact and the number of followers in 2021 on the destination's social media platforms may have contributed to the low number of user engagement.

For user comments on these posts, we retrieved tweet data directly from Twitter using Python scripts, Tweepy (an open-source Python library for accessing the Twitter Application Programming Interface (API), and the SQLite database management system version 3. For the digital platforms Facebook and Instagram, we used the Sudota comment tool for downloading. The dataset exhibited a multilingual composition, encompassing a total of 23,634 comments. Among these, English accounted for the majority (65.39%), followed by Portuguese (8.95%) and Spanish (5.39%), which were the languages selected for analysis. Of the total comments, 1,390 were recorded on social media platforms in Brazil, while 18,639 were documented in Portugal.

4.3.4. Data Analysis

Data analysis comprises different techniques and is divided into three parts: (i) content analysis, (ii) sentiment analysis, and (iii) frequency analysis. The figure below shows the analysis process.

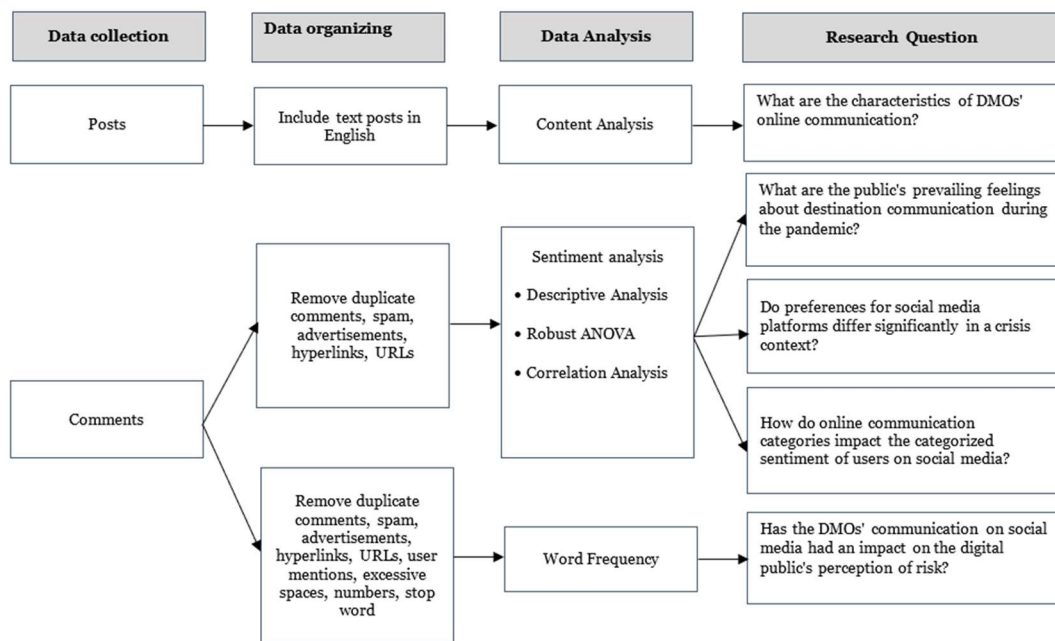


Figure 4.1. Methodological process overview

4.3.4.1. Content Analysis

Content Analysis was selected to identify the type of message distributed by DMOs on three social media platforms: Facebook, Instagram, and Twitter, answering RQ1. This research method allows valid inferences from the text using a set of procedures (Bardin, 1979). The data from the messages from the two DMOs were analyzed manually, comprising 91 from Brazil and 1520 from Portugal.

The coding scheme for categorizing the message type was adapted from Hays et al. (2013). Messages were classified into five categories: Promotion, Information, Customer Service, Call-to-Action, and General. The "Promotion" category encompasses the official website, other DMO media, external websites, DMO campaign promotions, and attributes of destination image, such as arts and crafts, celebrations and events, food and drink, infrastructure and facilities, music, dance, language, literature, safety, tourism experience, and tourist attractions and spaces. "Information" includes pandemic-related content, factual information providing dates or background information on specific topics, and opinion-oriented content, such as information on top lists or reviews of attractions. "Customer Service" involves responses to feedback and inquiries. "Call to Action" covers collaboration requests and contests. "General" included miscellaneous posts.

4.3.4.2. Sentiment Analysis

Sentiment analysis was employed to investigate social media users' perceptions of DMOs' communication strategies during the COVID-19 pandemic, focusing on the types of messages sent and the social media platforms utilized. As noted by García et al. (2012), sentiment analysis, a

component of NLP, is capable of extracting attitudes and affective tendencies from text by analyzing unstructured textual data.

A total of 20,029 social media comments were analyzed. The data was organized and sent as a table file with an XLSX extension. In their natural state, the collected texts were subjected to sentiment analysis using the classifier provided by IBM® Watson Natural Language Understanding (NLU), which uses deep learning to extract meaning and metadata from unstructured texts. The IBM Watson text sentiment classifier uses an approach based on machine learning algorithms, precisely a type of classifier known as Support Vector Machine (SVM), which is used to assign sentiment and emotion scores to texts. The use of a Python script facilitated the interaction with the IBM Watson API, enabling efficient language detection and integration, and demonstrating the technological advancement of the research.

The machine learning approach has received significant attention in the literature due to its prevailing classification performance (Drus & Khali, 2019). According to Sadia et al. (2018), this approach has better accuracy than lexicon-based. This methodology sought to guarantee the reliability and relevance of the conclusions obtained by analyzing sentiments expressed in texts collected on the aforementioned social media platforms.

The sentiment analysis categorized comments into positive, negative, or neutral, with polarity scores ranging from -1 (extremely negative) to +1 (extremely positive) and intensity scores 0 (neutral). The results included the analyzed text, assigned sentiment class, and classification scores, thus ensuring the reliability and relevance of the insights into public sentiment regarding DMOs' communication during the COVID-19 pandemic.

To address RQ2, a descriptive analysis was conducted utilizing the number of comments and their corresponding sentiment scores. As detailed by Fávero and Belfiore (2017), descriptive statistics are employed to characterize and summarize key features of the dataset through tables and graphs. This approach facilitates a clearer understanding of the data's behavioral patterns and overall trends.

To address RQ3, a robust ANOVA was employed to compare the mean sentiment scores across different social media platforms, aiming to determine if statistically significant differences exist. Traditional inference methods rely on assumptions of normality and homogeneity of variances; however, Wilcox (2017) highlights that deviations from these assumptions can lead to inaccurate confidence intervals and misrepresent the differences between groups. Wilcox further notes that simple data transformations do not always meet the general conditions required, and even with large sample sizes, minor deviations from normality can persist. To address these issues, this study utilized the robust ANOVA method proposed by Wilcox (2017), incorporating bootstrap techniques to obtain a robust estimator and mitigate problems associated with assumption violations. Statistical significance was determined at p -values < 0.05 .

In response to RQ4, the simple Correspondence Analysis (CA) method was employed. This method is particularly effective for analyzing categorical data and allows for the examination of associations between two categorical variables and their respective categories, as well as the strength of these associations. In this study, sentiment scores were analyzed alongside the identified online communication categories. The objective of CA is to create a perceptual map that facilitates the interpretation of similarities and differences in behavior between the variables and categories. CA organizes categorical variables into contingency tables and uses these coordinates to generate perceptual maps, representing variable categories as points on orthogonal axes (Fávero & Belfiore, 2017). The proximity of points on the map indicates a stronger association or similarity between variables, while greater distances reflect significant differences in their associations.

The analysis procedures were conducted utilizing software such as R, RStudio, and Jamovi, with the MEDA package for R employed for the data analysis tasks.

4.3.4.3 Word Frequency

To address RQ5, a word frequency analysis was performed to identify common themes in the comments. This involved querying word similarity among the most frequently occurring keywords (with three or more letters), which were grouped by exact matches. The keywords were selected to reflect the primary themes expressed within the comments. Given the multilingual nature of the data, with comments in both English and Portuguese, this approach ensured that the critical aspects of feedback on each social media platform were effectively highlighted. A word cloud was generated using Nvivo® software (version 12.0 Plus) for enhanced visualization.

The data was analyzed based on previous literature on risk perception and COVID-19, mainly in the studies by Carvache-Franco et al. 2022, who identified in their study the main topics of discussion on Twitter about the COVID-19 pandemic in relation to the risk perceived by the digital public, dividing it into six axes. On the economic side, terms such as "crisis", "economic", "financial", "economy", "health" and "risk" prevail. In the social section, the terms "social crisis", "risk" and "distancing". The terms associated with health include "health", "crisis", "risk", "public", "worker" and "care". With regard to work and its relationships, the predominant terms are "crisis", "worker", "work" and "risk". Concerning family, "crisis", "home", "risk", "son", "family" and "people" predominate. About business, the most prevalent terms were "crisis", "business", "help", and "risk". The most prominent terms associated with crisis and government have been "government" and "crisis".

These analyses offer valuable insights into the social media discourse in Brazil and Portugal during the COVID-19 pandemic. They facilitate the identification of public sentiment and risk perception, providing a clearer understanding of how these factors influenced and reflected the public's response to the communications of tourism management organizations during the crisis.

4.4. Findings

4.4.1 Characteristics of DMOs Online Communication

As outlined in Table 4.2, both organizations exhibited social media activity during the pandemic, with 1,611 posts across Facebook, Instagram, and Twitter - 92 originating from the @VisitBrasil account and 1,520 from @VisitPortugal. The Portuguese organization demonstrated considerably higher activity levels than its Brazilian counterpart. The Brazilian DMO experienced interruptions in communication during the latter half of 2020, with resumed activity only in July 2021. This fact, combined with the number of followers on the destination's social media platforms, may have contributed to the low number of user engagements.

Table 4.2. Data Panel

Variable	Brazil			Portugal		
	Facebook	Instagram	Twitter	Facebook	Instagram	Twitter
No. of posts	33	39	19	328	350	842
No. of comments	351	947	92	3840	13845	954
Average number of comments per post	10,3	24,3	4,8	8,5	48,0	4,6
No. of Followers	682.141	115.000	120.100	1.458.799	621.000	110.500
Comments per follower	0,051%	0,823%	0,077%	0,192%	2,703%	3,474%

* Data collected on January 22, 2021.

The analysis reveals that despite Facebook having more followers in both destinations, Instagram garners a higher volume of comments. This suggests that posts on Instagram are more effective at fostering engagement compared to those on other platforms. Conversely, the percentage of comments per follower indicates that Twitter users in Portugal exhibit more significant activity, consistent with findings from Hays et al. (2013). These results may also reflect the varying communication strategies employed by DMOs across different social media platforms during the crisis. For instance, Portugal issued 249 crisis-related messages, predominantly on Twitter, which could have influenced these engagement patterns.

The messages from Brazilian and Portuguese DMOs were systematically categorized into five distinct types: Call-to-Action, Customer Service, General, Information, and Promotion. Table 4.3 presents the distribution of these message types by DMOs in Brazil and Portugal across various social media platforms during the COVID-19 crisis.

Table 4.3. Online communication characteristics posted by DMOs in Brazil and Portugal

Online Communication Category	Brazil						Portugal					
	Facebook		Instagram		Twitter		Facebook		Instagram		Twitter	
	N	%	N	%	N	%	N	%	N	%	N	%
Promotion	23	70%	29	74%	12	63%	217	66%	235	67%	319	38%
Information	7	21%	8	21%	6	32%	71	22%	5	1%	427	51%
Customer Service	0	0%	1	3%	0	0%	0	0%	0	0%	54	6%
Call to Action	2	6%	0	0%	0	0%	31	9%	74	21%	28	3%
General	1	3%	1	3%	1	5%	9	3%	36	10%	14	2%
Total	33	100%	39	100%	19	100%	328	100%	350	100%	842	100%

The findings reveal a predominant prevalence of Promotional (52%) and Information (33%) messages across both destinations. Notably, promotional content is primarily disseminated through Facebook and Instagram. The primary focus of promotional content in both countries is on tourist attractions and venues. However, Portugal's DMO also focuses on destination safety, particularly highlighting the 'Clean & Safe' certification initiative and promoting external websites to discourage travel by showcasing virtual experiences. Informational content was predominantly distributed via Facebook and Twitter in Portugal. It is notable, however, that pandemic-related information predominated in crisis messages across both DMOs.

Approximately 8% of the messages were classified as Call-to-Action, predominantly distributed through Instagram and Facebook. Portugal contributed 133 messages within this category, often featuring prompts for user engagement or answers to trivia questions. Customer Service was seldom used, accounting for only 3% of messages. Portugal's Twitter account recorded 42 replies to information requests, with 23 of these responses individually addressing COVID-19 inquiries. The General category constitutes 4% of posts, predominantly observed on Instagram, characterized by greetings and inspirational content. The table below shows some of the messages identified on social media.

4.4.2. Sentiment Analysis

4.4.2.1. User's Sentiment About DMOs' Communication

Sentiment analysis was conducted on the dataset to understand the feelings that emerged in response to DMO communications on social media. The sentiments identified in the comments were classified on a polarity scale: negative, neutral, and positive. The groups were categorized based on the scores identified through IBM® Watson Natural Language Understanding, where values less than zero are classified as "Negative," values equal to zero are classified as "Neutral," and values greater than zero are classified as "Positive." Table 4.4 shows the distribution of the sentiment polarity.

Table 4.4. Sentiment polarity related to user comments by social media platform and country⁴

Country	Negative		Neutral		Positive		Total	
	N	%	N	%	N	%	N	%
Brazil								
Facebook	68	19%	116	33%	167	48%	351	100%
Instagram	71	7%	276	29%	600	63%	947	100%
Twitter	14	15%	34	37%	44	48%	92	100%
total	153	11%	426	31%	811	58%	1390	100%
Portugal								
Facebook	378	10%	1175	31%	2287	60%	3840	100%
Instagram	901	7%	3062	22%	9882	71%	13845	100%
Twitter	127	13%	262	27%	565	59%	954	100%
Total	1406	8%	4499	24%	12734	68%	18639	100%

The sample is unbalanced, with Brazil having 1,390 observations while Portugal has approximately 18,639. Given this disparity, the distribution of sentiment scores indicates an asymmetry in the data from both countries. Figure 4.2 demonstrates a higher concentration of comments with positive scores, reflecting a general trend of positive and neutral perceptions in both countries. This analysis suggests that, although both countries show an inclination towards positive or neutral perceptions, there are differences in the intensity and nature of the sentiments expressed in the comments. These differences may manifest in different sections of the sample.

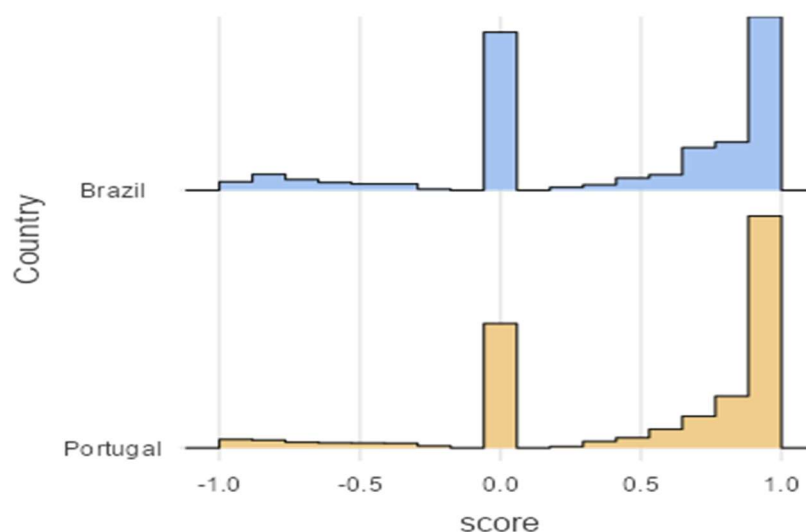


Figure 4.2. Distribution of sentiment analysis scores by country

Noticeably, the averages between the countries are similar, with outliers primarily in the Positive category. Figure 4.3 reveals differences in the distribution of the sentiments between Brazil and Portugal, highlighting variations in the sentiment expressed in comments across these two contexts.

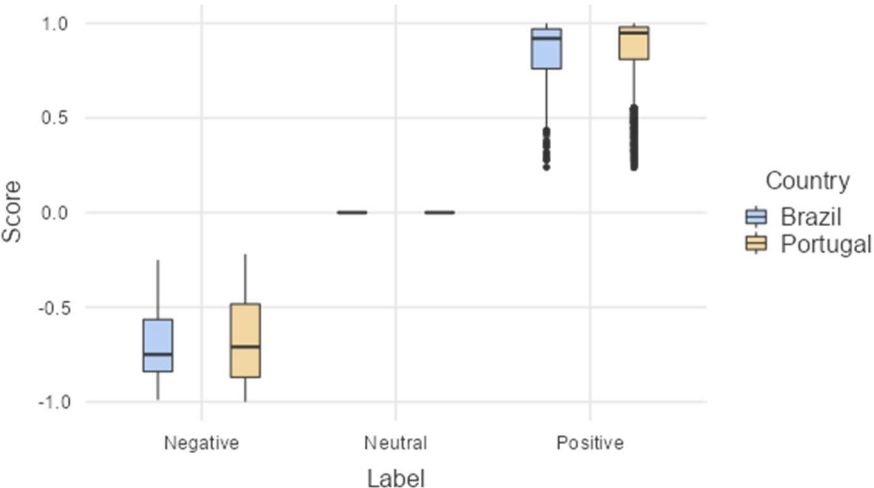


Figure 4.3. Boxplot diagram of sentiment polarities by countries

For negative sentiments, both Brazil and Portugal show similar medians and variability (-0.75 for Brazil and -0.71 for Portugal). However, the range of scores is slightly higher in Portugal (0.39) compared to Brazil (0.28). Regarding positive sentiments, Brazil has a median of 0.92 with an interquartile range (IQR) of 0.21. In contrast, Portugal displays a higher median of 0.95 and a lower IQR of 0.17, indicating a consistently more positive perception. Both countries exhibit a concentration of positive data near the upper limit of 1.0. The difference between the mean and median underscores the non-normal distribution and the presence of outliers within each group (see Table 4.5).

Table 4.5. Descriptive statistics of the sentiment polarity by Country

Polarity	Country	N	Mean	Median	SD	IQR	Minimum	Maximum
Negative	Brazil	153	-0.69	-0.75	0.20	0.28	-0.99	-0.25
	Portugal	1406	-0.67	-0.71	0.22	0.39	-1.00	-0.22
Neutral	Brazil	426	0.00	0.00	0.00	0.00	0.00	0.00
	Portugal	4499	0.00	0.00	0.00	0.00	0.00	0.00
Positive	Brazil	811	0.85	0.92	0.17	0.21	0.24	1.00
	Portugal	12734	0.87	0.95	0.16	0.17	0.24	1.00

These results indicate that customer engagement on social media is closely tied to the DMOs' communication efforts. Despite the prevailing positive sentiment in both countries, Portugal exhibited a more favorable sentiment overall. This may reflect the

greater involvement and proactive communication strategies implemented by the Portuguese DMO on social media during the pandemic.

4.4.2.2. Analysis of Preferences for Social Media Platforms

Table 4.6 shows the ratio between positive and negative comments (P/NG), positive and total (P/Total), and between negative and total (NG/Total). According to the results, positive comments prevail over negative and neutral ones on all social media platforms in both countries. These findings indicate that those who engaged directly with the DMOs' social media during the pandemic tended to have a positive perception. This aligns with previous studies in the tourism industry conducted in non-crisis contexts (e.g., Guedes & Gosling, 2023).

Table 4.6. Sentiment polarity of comments by social media platforms

Destination	Platform	Negative	Neutral	Positive	P/NG	P/Total	NG/Total
Brazil	Facebook	68	116	167	2,456	0,476	0,194
	Instagram	71	276	600	8,451	0,634	0,075
	Twitter	14	34	44	3,143	0,478	0,152
Portugal	Facebook	378	1175	2287	6,050	0,596	0,098
	Instagram	901	3062	9882	10,968	0,714	0,065
	Twitter	127	262	565	4,449	0,592	0,133

When analyzed proportionally, there is a slightly higher incidence of negative comments on Facebook and Twitter pages, which may indicate a greater tendency for users of these platforms to express negative feelings in their comments.

To validate this finding, an ANOVA was carried out. However, as previously discussed, the sample does not meet the assumptions of a classic ANOVA, and the results of Levene's test show a significant lack of homogeneity of variances between the groups analyzed. To minimize this problem, the robust method proposed by Wilcox (2017) was used. Robust ANOVA makes it possible to identify the difference between the average score between social media platforms in situations where the assumptions of normality and homogeneity of variance are compromised. The F-statistic of 180.16 suggests significant differences between the groups; these differences are statistically significant due to a p-value of less than .001. The total variance the social media variable explains is 3%, and the effect size is 0.19. This indicates an observed difference of less than 0.2 standard deviations, which is classified as a small effect according to Cohen (1988). Despite the small effect size, a significant difference in the average scores between the platforms is evident.

However, these results do not indicate which category demonstrates a difference in means, necessitating the robust Post Hoc Test (Table 4.7).

Table 4.7. Post Hoc Test to Social Media Platform

Social Media Platform		psi-hat	p	Lower	Upper
Facebook	Instagram	-0.22	< .001	-0.24	-0.19
	Twitter	0.01	0.606	-0.05	0.07
Instagram	Twitter	0.23	< .001	0.18	0.28

* 95% Confidence Interval

The Post Hoc Test was conducted to identify which specific groups differ from each other. The psi-hat represents the estimated average difference between the two groups. It was observed that Facebook has a significantly lower average score compared to Instagram, with a difference of -0.22, which is statistically significant as indicated by the confidence interval not including zero. Similarly, a significant difference was found between Instagram and Twitter, with Instagram comments having a higher positive score (0.23), and this difference is statistically significant, with a p-value of less than .001. Finally, the average scores between Facebook and Twitter are very similar and statistically equivalent, as evidenced by the confidence interval containing zero.

Given this, there are differences in the average sentiment polarity in posts between social media platforms. This finding may reinforce the hypothesis that Instagram has a more significant potential for success in obtaining the benefits of digital marketing, even in a context of crisis, as pointed out by previous studies (e.g., Guedes & Gosling, 2023).

4.4.2.3. Correspondence Analysis

Table 4.8 shows that both countries' positive sentiment prevails across all online communication categories during the COVID-19 pandemic. The Promotion category is particularly notable for its strong positive sentiment in Brazil and Portugal, followed by the General category. Despite this, the Customer Service category was minimally utilized in both countries despite exhibiting a high percentage of positive sentiment in Brazil. Notably, no communication category experienced a significant peak in strongly negative sentiment.

Table 4.8. Sentiment Polarity of comments by online communication category

Communication Online Category	Brazil						Portugal					
	Negative		Neutral		Positive		Negative		Neutral		Positive	
	N	%	N	%	N	%	N	%	N	%	N	%
Call to action	9	17%	21	39%	24	44%	234	7%	887	26%	2240	67%
Customer Service	4	10%	9	21%	29	69%	5	11%	13	29%	27	60%
General	7	12%	17	29%	34	59%	93	6%	325	20%	1214	74%
Information	39	13%	115	38%	152	50%	196	12%	509	31%	956	58%
Promotion	94	10%	264	28%	572	62%	902	7%	2917	23%	8726	70%
Total	153	11%	426	31%	811	58%	1430	7%	4651	24%	13163	68%

However, when evaluating the average sentiment scores of online communication strategies, there are differences in the polarity of sentiment between the two countries: while Promotion, Customer service, and General tend to have positive results in both countries, Call-to-action and Information have neutral sentiment (Figure 4.4).

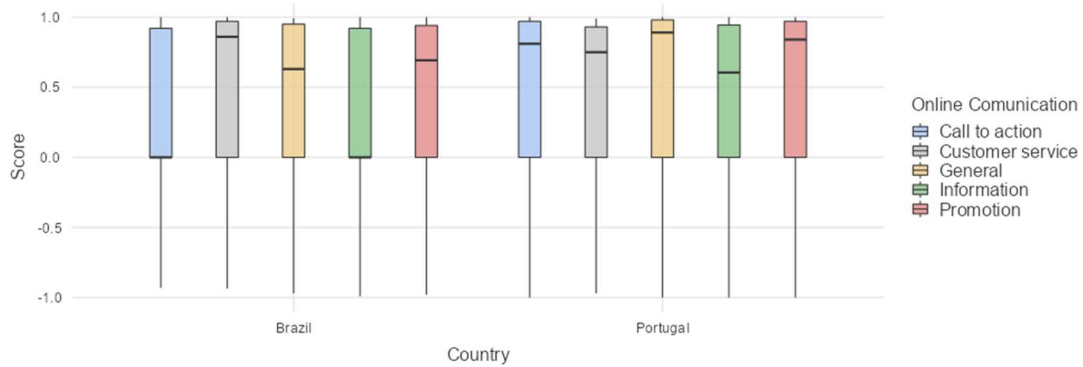


Figure 4.4. Boxplot diagram of sentiment polarities by online communication categories

Given these results, a correspondence analysis was conducted to identify an effective online communication strategy for crisis times. This analysis explored how different communication categories across social media platforms influence categorized sentiment.

Two variables, 'online communication' (Promotion, Information, Customer Service, Call-to-Action, General) and 'sentiments' (negative, positive, neutral), were used as input. The Chi-squared test (χ^2) was performed to determine whether there is a significant association between the variables. The null and alternative hypotheses for the test can be defined as follows: H₀ (the two categorical variables are randomly associated), and H₁ (the association between the two categorical variables is not random).

The results of the χ^2 test reveal that all of these relationships were significant with a p-value of less than 0.05, as shown in Table 4.9, rejecting H₀, indicating the existence of a

statistically significant association between the type of message and its sentiment rating. For the total sample, the χ^2 value is 156.46 with a p-value of less than 0.001, indicating that the differences observed are not due to chance.

Table 4.9. Pearson's Chi-Squared Test

Destination	X-squared	df	p
Brazil	20.13	8	0.010
Portugal	131.55	8	< .001
Total	156.46	8	< .001

This is followed by a more detailed examination of each variable's categories using adjusted standardized residuals (see Table 4.10). This analysis highlights the characteristic patterns within each category, illustrating how occurrences deviate from expected values in combination with categories of the other variable. The adjusted standardized residuals represent the differences between observed and expected absolute frequencies. These residuals show which categories are associated with sentiment polarity; values greater than 1.96 are considered statistically significant at a p-value of 0.05.

For Brazil, most of the categories, Call-to-action, Custom Service, and General, had no statistically significant association with any of the sentiment categories. In Portugal, customer service had no association with the sentiment variable. Negative sentiment is only associated with Information in Portugal. Promotion is predominantly positive in both countries.

Table 4.10. Contingency Table

Country	Online Communication	Frequency	Sentiment			Total
			Negative	Neutral	Positive	
Brazil	Call to action	Observed	9	21	24	54
		Expected	5.94	16.55	31.51	54.00
		Adjusted Residual	1.36	1.34	-2.11	
	Customer service	Observed	4	9	29	42
		Expected	4.62	12.87	24.51	42.00
		Adjusted Residual	-0.31	-1.32	1.43	
	General	Observed	7	17	34	58
		Expected	6.38	17.78	33.84	58.00
		Adjusted Residual	0.26	-0.23	0.04	
	Information	Observed	39	115	152	306
		Expected	33.68	93.78	178.54	306.00
		Adjusted Residual	1.1	2.98	-3.48	
	Promotion	Observed	94	264	572	930
		Expected	102.37	285.02	542.61	930.00
		Adjusted Residual	-1.52	-2.6	3.4	
Portugal	Call to action	Observed	234	887	2240	3361
		Expected	253.53	811.26	2296.21	3361.00
		Adjusted Residual	-1.41	3.37	-2.3	
	Customer service	Observed	5	13	27	45
		Expected	3.39	10.86	30.74	45.00
		Adjusted Residual	0.91	0.75	-1.2	
	General	Observed	75	273	982	1330
		Expected	100.33	321.03	908.64	1330.00
		Adjusted Residual	-2.73	-3.19	4.49	
	Information	Observed	194	475	923	1592
		Expected	120.09	384.27	1087.64	1592.00
		Adjusted Residual	7.33	5.56	-9.27	
	Promotion	Observed	898	2851	8562	12311
		Expected	928.66	2971.58	8410.77	12311.00
		Adjusted Residual	-1.8	-4.36	5.03	
Total	Call to action	Observed	243	908	2264	3415
		Expected	265.81	839.73	2309.46	3415.00
		Adjusted Residual	-1.6	2.98	-1.83	
	Customer service	Observed	9	22	56	87
		Expected	6.77	21.39	58.84	87.00
		Adjusted Residual	0.89	0.15	-0.65	
	General	Observed	82	290	1016	1388
		Expected	108.04	341.30	938.66	1388.00
		Adjusted Residual	-2.7	-3.31	4.6	
	Information	Observed	233	590	1075	1898
		Expected	147.73	466.71	1283.56	1898.00
		Adjusted Residual	7.68	6.91	-10.75	
	Promotion	Observed	992	3115	9134	13241
		Expected	1030.64	3255.88	8954.48	13241.00
		Adjusted Residual	-2.15	-4.88	5.73	

* Adjusted Residual valid for values greater than 1.96

Based on these results, the correlation was analyzed using the total sample to identify a consistent online communication strategy. The percentage of variance explained by the first dimension is 94.17%, and 5.83% for the second dimension. Figure 4.5 shows the perceptual map of the correspondence analysis of the online communication categories and the polarities of the sentiments.

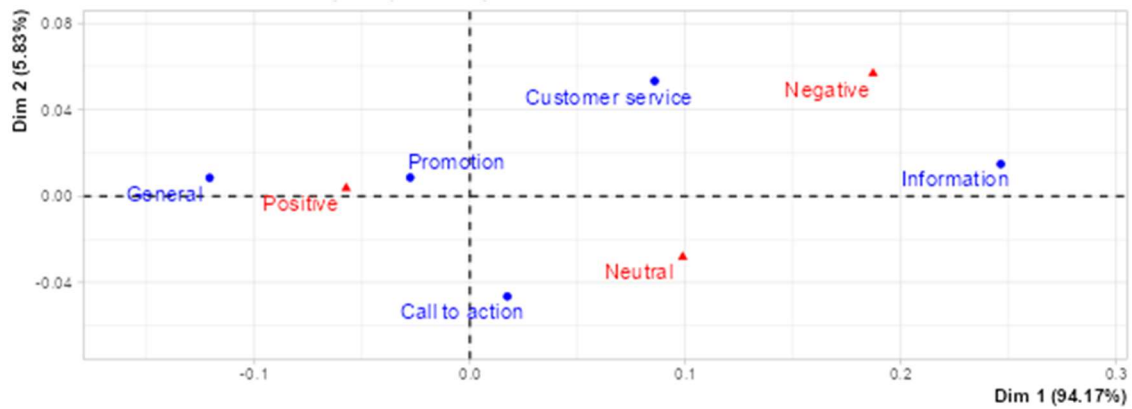


Figure 4.5. Perceptual map

The proximity of points on the perceptual map reveals stronger associations or similarities between categories concerning their perception or treatment in communications. The percentage of variance explained by the first dimension is 94.17%, and 5.83% for the second dimension.

The analysis indicates that the Promotion and General categories are strongly associated with Positive sentiment, while the Information category is more closely linked to Negative sentiment. These findings suggest that promotional and emotional posts gained more engagement than informative posts. In contrast, Huertas et al. (2020) found that DMOs received more support in publications related to the COVID-19 crisis and to a lesser extent in content aimed at tourism promotion.

The Call-to-Action category tended to be associated with Neutral sentiment. Call-to-action messages are typically directive and transactional, encouraging users to take a specific action. Unlike promotional or general content, which may evoke positive emotions. Contrarily to other studies during regular periods (e.g., Hays et al., 2013; Minazzi, 2015; Molina et al., 2020; Uşaklı et al., 2017), which considered call-to-action an important element to attract customers' attention.

Despite its proximity to Negative sentiment on the perceptual map, the adjusted standardized residuals do not show a significant association between Customer Service and sentiment categories. This suggests that, while users may have had some negative feelings associated with customer service interactions, the overall low frequency of engagement in this category limits the ability to draw strong conclusions. This aligns with the notion that during a crisis, users may prioritize more proactive and emotionally resonant content, such as promotion and general messages, over service-oriented interactions.

4.4.3. DMO Communication and User Risk Perception

Word clouds visualized the analysis of comments regarding risk perception and destination image during the crisis. The 15 most frequently cited words in user comments on the DMOs' social media during the COVID-19 pandemic were identified to manage the large sample size and extract meaningful insights. Figures 4.6 and 4.7 display the word clouds representing user comments for DMOs in Brazil and Portugal on each social media platform.

The top words identified on the Brazilian DMO's Facebook page were: "brazil", "beautiful", "visit", "fame". While the majority of the terms carry positive connotations, it is notable that the word "president" appears among the top 15 most frequent terms, warranting further investigation. It suggests a perception related to the country's political situation, but it is not possible to say whether this is linked to the perceived risk of the health crisis.

On Instagram, no terms that referred to the perception of risk were identified. The main terms were: "beautiful", "brazil", "visit", "waterfalls", "paradise". The main terms in the Twitter comments were: "beautiful", "brazil", "beauty", "people", "place". However, in addition to these terms, terms were identified that refer to the perception of risk about the pandemic, such as: "test", "problem", "safe", "work", and "reschedule".



Figure 4.6. The most salient terms cited in the user's comments on social media platforms of Brazil's DMO

The main terms on the Portuguese DMO's Facebook page are: "Portugal", "beautiful", "love", "flights", "happy". However, some terms refer to the perception of risk, such as "test", "help", and "problem". On Instagram, the following terms stand out: "beautiful", "Portugal", "place", "light", "love". On Instagram, the only term that refers to a perception of risk is the term "problem", all the other words are geared towards a positive appreciation of the destination. On Twitter, the words that stand out in the comments are: "Portugal", "visit", "beautiful", "airline", "test". There is greater concern about the

pandemic on Twitter, the only social media site to feature the word "Covid" among the main key terms, as well as "test", "health", "pcr", and "people".



Figure 4.7. The most salient terms cited in the user's comments on social media platforms of Portugal's DMO

These findings suggest that Instagram users are more interested in using the platform as a distraction than seeking information about the crisis, unlike Facebook and especially Twitter users, who had a higher risk perception. However, these findings may align with the communication strategy used by the DMO, given that messages with information content are the majority on Twitter in Portugal. In contrast, promotional messages predominate on Instagram, as presented in Section 4.4.1. Facebook was used to disseminate promotional messages first, followed by information in Portugal and Brazil.

After presenting each platform individually, the general context of social media was analyzed. Figure 4.8 clearly shows the frequent terms in user comments, reflecting the public's perception of the image of the destinations Brazil and Portugal.



Figure 4.8. Topic overview of destinations Brazil and Portugal during the Covid-19 pandemic

In general, there was a positive perception of the image of the destinations. In Portugal, the principal terms used in the comments were: "beautiful", "portugal", "place", "visit", "love". On the Brazilian DMO's social media, they were: "beautiful"; "brazil"; "place"; "visit"; and "people". From this perspective, these words reinforce the idea that the

DMOs' communication on social media during the crisis period managed to soften users' risk perception while remaining distant from the theme of the COVID-19 crisis.

4.5. Discussion and Conclusion

This study aimed to analyze the behavior of digital audiences across different social media platforms managed by the DMOs of Brazil and Portugal in response to the uncertainties introduced by the COVID-19 pandemic in the tourism sector, employing a multi-method approach. The findings reveal significant disparities in social media usage and public engagement between the Brazilian and Portuguese DMOs during the crisis. Notably, the Brazilian DMO's temporarily suspending communication exacerbated these differences, indicating a lack of a coherent online communication strategy and insufficient user engagement. This observation suggests that adopting a strategy of silence during challenging periods is counterproductive for organizations (Hvass, 2013).

Despite significantly reducing the Brazilian DMO's media communication, both countries exhibited a generally positive perception in the sentiment analysis. However, the results for Portugal demonstrate a consistently more favorable perception, indicating more effective utilization of the DMO's social media communication efforts during the pandemic. The analysis supports the notion that DMO communication on social media during a crisis is likely to enhance positive emotions and, consequently, increase tourist satisfaction (Wang et al., 2024).

In addition, the word frequency analysis revealed a predominantly positive perception of the destinations' image, suggesting that the public is more impressed by the inherent beauty of these locations than concerned about the DMOs' handling of the social media crisis. This finding implies that the content engaged significantly influences individuals' perceptions of the destinations. Conversely, Shin et al. (2023) argue that the inherent complexity of the destination experience can shape public perceptions. Additionally, Ebrahimi et al. (2020) noted that the content of social media posts alone is insufficient to alter an established image of a destination significantly. Consequently, these results may reflect that the positive image of the destinations existed prior to the crisis. Nevertheless, the findings suggest that destination organizations have the potential to mitigate the impact of external uncertainties during a crisis, restore consumer confidence, and foster improved relationships through strategic social media communication (Barbe et al., 2018; Oliveira & Huertas, 2019; Taecharungroj & Pattaratanakun, 2023).

The study also highlighted significant differences between social media platforms, confirming Instagram's effectiveness in managing the image of tourist destinations during a crisis. While platforms such as Facebook, Instagram, and Twitter each have substantial digital audiences and organizational engagement, they differ markedly in terms of service offerings, reach, and usage patterns. The findings indicate that Instagram users exhibited a notably positive perception of the communication from DMOs, suggesting that Instagram holds considerable potential for leveraging digital marketing benefits for tourist destinations, even amid a crisis. This observation challenges the prevailing literature that identifies Twitter as the primary platform for crisis management (e.g., Hays et al., 2013; Carvache-Franco et al., 2022; Triantafillidou & Yannas, 2020;). The results imply a higher level of engagement and loyalty on Instagram compared to Facebook and Twitter. Contributing factors may include Instagram's rich visual content, which has been shown to enhance imagination and evoke emotions, particularly in the context of image repair (Filiari et al., 2021; Pachucki et al., 2022; Pasquinelli et al., 2022).

Consistent with prior research on social media crisis communication (e.g., Kwok et al., 2022), the study revealed variations in users' risk perceptions of DMOs' content, potentially influenced by the digital platform utilized. The findings suggest that Instagram users often use this platform as a distraction form and feel a sense of identification with the content presented by DMOs. Notably, the analysis did not uncover terms indicative of a heightened perception of risk related to the pandemic crisis. This outcome may be attributable to the nature of the messages shared by the organizations, with Instagram posts predominantly falling into the Promotional and General categories. This aligns with earlier research, such as that by Joseph and Anandkumar (2021), which observed limited content focused on COVID-19 on Instagram. Such a strategy may have been employed to mitigate the public's risk perception (Barbe & Pennington-Gray, 2018) and to maintain a consistent image of the destination, as it was prior to the pandemic (Joseph & Anandkumar, 2021). In contrast, Facebook and especially Twitter users, who encountered more information-focused messages, exhibited a higher risk perception. This suggests that DMOs can effectively manage tourists' risk perceptions by minimizing crisis-related content and emphasizing destination promotion, corroborating findings from previous studies (e.g., Joseph & Anandkumar, 2021; Pachucki et al., 2022).

This leads to the association of Instagram with the results inferred from the correlation analysis between DMOs' online communication categories and user sentiment categories, as discussed in Subsection 4.4.2.3. Promotion and General messages emerged as the most effective communication strategies for destination organizations in a crisis

context, given that these categories were perceived positively by social media users. This finding aligns with existing literature, which suggests that promotional messages should extend beyond mere product promotion, such as tourist attractions and venues (Kwok et al., 2022; Pachucki et al., 2022). For instance, Portugal's DMO utilized messages that promoted destination safety and highlighted external websites with virtual experiences. These strategies served both as a distraction during lockdowns and as reassurance of tourist safety, reflecting earlier research on crisis communication by destinations during the COVID-19 pandemic (Huertas et al., 2020; Avraham, 2021; Joseph & Anandkumar, 2021). Furthermore, these findings resonate with Shin et al. (2023), who noted that tourists responded more positively to non-advertising content in DMOs' YouTube ads.

General messages characterized by greetings and inspirational content utilize intense emotional expressions while avoiding explicit references to the pandemic. This strategy appears to be aimed at evoking positive emotions in digital audiences, aligning with previous research recommendations (e.g., Aguado-Correa et al., 2022; Gonzalez et al., 2021; Li et al., 2022; Pachucki et al., 2022).

Messages classified as Call-to-Action, which often include prompts for user engagement or trivia questions, are designed to foster interaction and increase participation, as Minazzi (2015) suggested. However, the results indicate a strong association between this communication category and neutral sentiment, suggesting that it did not significantly influence social media users' sentiments. This outcome may be attributed to the nature of the strategy, which, while encouraging interaction, does not necessarily forge emotional connections between the organization and its audience.

Information messages were associated with negative sentiment, mainly due to their focus on pandemic-related content, which heightened risk perception. This suggests that the public may be less receptive to technical information about COVID-19 when engaging with DMOs' social media platforms. This finding contrasts with previous research (e.g., Barbe et al., 2018; Huertas et al., 2020; Kwok et al., 2022), which posits that tourists expect to find crisis-related information on destinations' online channels.

The analysis of Customer Service messages reveals no significant association with any sentiment categories, indicating that this category was underrepresented in the sample and not pivotal to the DMOs' communication strategies. This observation suggests that the organizations utilized their platforms infrequently for customer service, likely responding only to specific user inquiries rather than engaging in broader interactions. When employed, Customer Service responses were generally focused on providing

information and included links to authoritative sources, which may have limited the potential for establishing emotional connections with users, in contrast to findings from previous research (e.g., Hvass, 2013).

In conclusion, the study reveals distinct differences in how digital audiences perceive various types of messages communicated by DMOs during a prolonged crisis such as COVID-19. The findings underscore that DMOs' social media communication can significantly influence public sentiment. Specifically, messages that provide distraction and evoke positive emotions tend to mitigate risk perceptions and encourage potential visitation to the destination. These insights can inform the development of social media communication strategies during crises, emphasizing the importance of engaging and emotionally resonant content to enhance organizational relationships with the digital audience, rehabilitate the destination's image, and foster tourism recovery.

4.5.1. Theoretical and Managerial Contribution

The results offer valuable practical implications and significantly contribute to the existing knowledge of crisis communications in tourism. This study enriches the literature by integrating both consumer-centered perspectives (e.g., customer engagement on social media) and supplier-centered perspectives (e.g., DMOs' social media efforts). Unlike previous research that primarily focuses on organizational responses to crises (e.g., Avraham & Kette, 2017; Barbe et al., 2018; Joseph & Anandkumar, 2021; Ketter, 2016; Oliveira & Huertas, 2019), this study distinguishes itself by examining the critical role of DMOs' social media strategies during crises and analyzing user-generated content in response to these communications. This novel approach provides a comprehensive understanding of how both organizational efforts and consumer interactions shape perceptions and engagement in a crisis context.

A key success factor of this research is its focus on understanding social media users' behavior regarding DMOs' online communication strategies. Hu et al. (2019) state that analyzing comments can reveal competitive advantages and help align marketing and promotion strategies. This study leverages organizational content and user comments to offer valuable insights for future research and practical guidelines. Consequently, it addresses a gap in the literature concerning how destination organizations implement strategies in response to crisis communication, aiming to mitigate negative outcomes (Carvache-Franco et al., 2022).

This study makes another significant contribution to the crisis communication literature by expanding the focus beyond the predominantly analyzed platform of Twitter (e.g., Barbe et al., 2018; Carvache-Franco et al., 2022; Huertas et al., 2020; Triantafillidou & Yannas, 2020). By examining multiple social media platforms, the research highlights notable differences between them and uncovers patterns in user behavior across these media. Users typically turn to social media during crises for satisfaction and comfort and to achieve specific goals such as alleviating tension and uncertainty (Li et al., 2019; Spence et al., 2015). The study identifies Instagram as particularly effective for digital marketing and destination image recovery in a crisis context.

This research also addresses a gap noted by Sigala (2020), who points out the insufficient attention given to the influence of social media on tourists' risk perception in crisis communication studies. By analyzing user-generated content on DMOs' social media pages, the study provides insights into how the digital public's risk perception evolved during the crisis. The findings suggest that comments are instrumental in shaping individuals' perceptions of the content they interact with, aligning with Lee et al. (2021), who emphasize the significant role of user-generated feedback in understanding public sentiment.

The present study reaffirms that the substantial volumes of data generated by social media provide a unique opportunity for extracting valuable insights (Ragini et al., 2018). Given the complexity of analyzing short-text data, such as social media comments, this study broadens the application of advanced data science methodologies for knowledge extraction within DMOs. The findings demonstrate that analyzing comments on social media platforms can significantly enhance the effectiveness of crisis communication (Shin et al., 2023).

In addition, this study provides significant implications for destination management organizations navigating a crisis. It responds to the need for effective social media management strategies in tourism and evaluates the success of DMOs on social media through customer engagement metrics. The findings highlight that the promotional and emotional content of messages is crucial for destination organizations during crises. Social media users perceived promotional content positively, viewing it as engaging and reassuring rather than overt advertising. Inspirational and emotional content emerged as valuable during uncertain times. Furthermore, Instagram proved to be the most effective platform for managing the image of tourist destinations in a crisis. These insights should inform the development of social media communication strategies that

enhance organizational relationships with digital audiences, facilitate image recovery, and promote tourist destinations effectively.

Therefore, this study advances the underexplored area of research on how DMOs should effectively manage social media activities during a crisis. The findings offer valuable insights for further research into consumer and organizational behavior on social media. Additionally, the results provide practical guidance for tourist destinations aiming to enhance their digital presence in crises. By maintaining engagement with users and leveraging brand visibility, destinations can better navigate challenges and strengthen their relationships with digital audiences.

4.5.2. Limitations and Future Research

Despite its many contributions, the study has some limitations. Firstly, the analysis was confined to a specific and relatively brief period, which, while insightful for understanding user behavior during a crisis, limits the comprehensiveness of the data. Extending the analysis period and segmenting the crisis into distinct phases could enhance the accuracy of both theoretical exploration and empirical conclusions, as a more detailed examination of crisis phases could provide valuable insights (Aliperti et al., 2019). Secondly, the research focused on two tourist destinations, which, while allowing for an in-depth examination of best practices in crisis communication, limits the generalizability of the findings. Additionally, Brazil's disruption in social media communication during the study period may have affected the data collected. A broader geographical scope and a more extensive, diverse data set would offer a more comprehensive understanding of crisis communication dynamics. Thirdly, the study analyzed data from Facebook, Instagram, and Twitter. While these platforms are significant due to their large audiences and engagement levels, they only encompass part of the spectrum of public sentiment and risk perception. Including additional social media platforms could provide a more varied and nuanced assessment of user emotions and risk perceptions.

Future research can build on the findings of this study in several ways. As highlighted by Hardt and Glückstad (2024), comments significantly influence individuals' perceptions of the content they engage with. Subsequent studies could investigate whether and how user comments on DMOs' social media content impact perceptions of the communicated messages. Additionally, exploring communication networks during crises could yield valuable insights. Research could focus on identifying influential actors and opinion

leaders within these networks, allowing organizations to leverage these figures in their crisis communication strategies and social media marketing efforts.

Furthermore, while social media data provides substantial insights, complementary survey studies could further elucidate public behavior. Future research might examine variables such as trust, satisfaction, perceived credibility of the source, and media richness to better understand their impact on visit intention and overall engagement (Wang et al., 2024).

Finally, while much of the existing research has focused on Twitter for crisis communication, the findings of this study suggest that Instagram warrants further investigation for its utility in crisis management by destination marketing organizations. Instagram's integration of evocative imagery with concise textual content enhances destination imagery and significantly influences public emotions (Fileri et al., 2021; Pasquinelli et al., 2022). Therefore, future research should consider exploring the role of visual content on Instagram to deepen understanding of destination strategies during crises.

Chapter 5 - Adapting Tourism Promotion During Crisis: A Visual Content Analysis of Portugal's Instagram Strategy

This chapter presents the fourth study of this thesis, which comprehensively analyses Portugal's image projection on social media during the pandemic. Through a visual content analysis of 763 photographs posted by Portugal's organization on Instagram from 2019 to 2021, covering periods before, during, and after the pandemic, the study provides valuable insights into the DMO's adaptive strategies. The findings reveal that user engagement was higher during the lockdown than before and after, indicating that, in difficult times, DMOs should enhance their social media communication efforts to distract the public and foster an emotional connection with them. This research also underscores destinations' strategic approaches to maintaining their image during prolonged crises. It suggests that aligning Instagram content with the destination's identity while incorporating diverse cultural elements can optimize engagement strategies and enhance destination promotion efforts during future crises.

5.1. Introduction

One of the primary determinants in selecting a tourist destination is the presence of a strong positive image (Baloglu & McCleary, 1999; Choi et al., 2007; Echtner & Ritchie, 1993; Kim & Perdue, 2011; Sönmez & Sirakaya, 2002; Wang, 2017). However, the image of a destination is a fragile asset that can be adversely affected by events, leading to an undesirable and negative impact, referred to as an 'image crisis' (Ketter, 2016). Consequently, creating and managing an appropriate tourism destination image is crucial for effective positioning and marketing strategies (Echtner & Ritchie, 1993).

Numerous risks and crises, including the COVID-19 pandemic in early 2020, have significantly impacted contemporary tourism. According to Zenker and Kock (2020), COVID-19 is unique in terms of the complexity and duration of the stages of its life cycle. This unprecedented global challenge has posed formidable obstacles to international travel. Governments responded by implementing various safety measures, including

travel restrictions, lockdowns, and social distancing protocols (Joseph & Anandkumar, 2021), resulting in profound economic repercussions for tourist destinations.

Consequently, destination management organizations (DMOs) have faced considerable challenges, particularly in restoring tourists' confidence amidst heightened health concerns (Tuclea et al., 2020), promoting their brands, and positioning themselves within markets (Joseph & Anandkumar, 2021; Pasquinelli et al., 2022). Amidst the mobility constraints imposed by the pandemic, destinations primarily existed in the virtual realm, prompting DMOs to maintain an active presence on social media platforms to uphold brand reputation (Pasquinelli et al., 2022). Therefore, it is imperative to understand and integrate the relationship between crisis communication and image projection into marketing and promotion strategies for tourist destinations on social media. This integration is essential for effectively managing a destination's image during crises and ensuring sustained engagement with potential travelers.

Online content curated by DMOs serves as a valuable resource for comprehending the image projection of a destination, particularly within a crisis context (Choi et al., 2007). However, numerous studies (e.g., Choi et al., 2007; Xiang & Gretzel, 2010) have examined the role of social media in destination image formation primarily through the lens of user-generated content (UGC). Additionally, previous research focusing on online image projection has predominantly utilized datasets comprising online travel blog texts or reviews, as well as official tourism website texts (e.g., Choi et al., 2007; Pan et al., 2014; Mak, 2017), largely overlooking the DMOs' social media presence. Consequently, there exists a gap in the literature regarding the utilization and impact of social media on destinations' image projection in a crisis context. In this regard, it is argued that understanding how DMOs have used social media marketing to communicate their image during a pandemic can identify best practices for managing future crises.

Addressing this research gap, the present study aims to analyze Portugal's projected tourism image on social media platforms by national DMO. Portugal, a significant player in the global tourism sector, was chosen for this case due to the sheer importance of its tourism industry and its notable resilience and adaptability in recovering from the pandemic effects. Three distinct periods (pre-lockdown, lockdown, and post-lockdown) were studied to scrutinize the destination's online promotional strategies. These periods distinguished between periods of strict lockdown and phases with eased restrictions on leisure activities during the COVID-19 pandemic. A meticulous dissection of individual crisis stages can yield substantial insights within the realm of crisis and disaster studies (Aliperti et al., 2019).

To achieve this purpose, a visual content analysis was conducted on Instagram social media to identify the visual categories of DMOs' posts, emerging patterns of change, and levels of social media user engagement. Online visual content is a powerful means for destinations to convey their image and a diverse range of information concisely (Choi et al., 2007; Pan et al., 2014). Instagram was selected as the platform for this study, given its ability to integrate the evocative potential of photographs with brief yet impactful text content (Gon, 2021). Despite the growing popularity of this digital platform within academic circles (e.g., Filieri et al., 2021; Gonzalez et al., 2021; Lenggogeni et al., 2022; Pasquinelli et al., 2022), there remains a paucity of research utilizing its data, mainly due to the prevalence of textual content dominating social media studies, owing to the relative ease of collecting and processing text compared to images (Gon, 2021).

This study makes a substantial contribution to the literature by advancing prior research on digital marketing during crises. It specifically focuses on the promotional strategies utilized by destination management organizations throughout an extended crisis and examines the patterns of social media user engagement.

5.2. Theoretical Background

5.2.1. Tourism Destination Image Projection

The literature widely acknowledges that destination image constitutes a fundamental component of the traveler's decision-making process and travel behaviors (Baloglu & McCleary, 1999; Choi et al., 2007; Gallarza et al., 2002). Research on destination image commenced in the early 1970s, with seminal works exploring the connection between destination image and visit intentions (Crompton, 1979; Hunt, 1975; Goodrich, 1978). Since then, the assessment and analysis of destination images have garnered significant academic interest and have become prominent topics of discussion in the field of tourism (Iglesias-Sánchez et al., 2020; Sun et al., 2021).

The concept of destination image, as commonly adopted in the literature, encompasses a wide range of elements, including perceptions, beliefs, ideas, and impressions that individuals hold about a place or destination (Crompton, 1979; Kotler et al., 1993). Lai et al. (2016) further expanded this definition to include tourists' feelings, perceptions, mental representations, cognitive maps, awareness, memories, and attitudes, thereby summarizing destination images as tourists' psychological experiences.

In Gartner's research (1994), destination images were composed of cognitive, affective, and conative components. Since Gartner's work, numerous researchers have posited that a tourist destination's image is a hybrid composed of both cognitive and affective components that are highly interrelated. Consequently, the image is not solely based on the physical and tangible perception of the place but also on the mental and emotional connections that, whether consciously or unconsciously, link tourists to the destination (Beerli & Martín, 2004; Huertas & Marine-Roig, 2016; Kastenholtz, 2002;). However, it is generally accepted that the cognitive components of the destination image precede the affective components, as evaluative responses are derived from individuals' knowledge of places (Beerli & Martin, 2004; Gkritzali et al., 2018; Liu et al., 2024; Markwick& Perdue, 2011;).

From a marketing perspective, considering both supply and demand, the image of tourist destinations is categorized into projected and perceived images (Kotler et al., 1993). The projected destination image refers to the image that a destination aims to establish in tourists' minds through marketing actions across various information sources, emphasizing its strengths and resources. In contrast, the perceived image encompasses the holistic impressions, perceptions, and feelings tourists hold regarding a destination's tourism products and offerings, shaped by the information received and the tourists' experiences (Bui et al., 2022; Sun et al., 2021;). This indicates that the tourists perceived destination image is predominantly influenced by the projected image derived from the destination's identity and the marketing strategies employed by local agents. Nevertheless, according to Wang et al. (2023), the perceived image holds a central position in scientific research, encompassing its measurement, the various factors influencing it, and its interactive relationship with travel behaviors.

Indeed, as outlined by Fakeye and Crompton (1991), the primary objective of destination promotion is to cultivate attractiveness and desirability among potential consumers, thereby enticing them to engage with the destination product. Thus, according to Kotler et al. (1993), accurate identification, evaluation, management, promotion, and monitoring of the destination image are imperative. These processes serve as fundamental tools for positioning, differentiation, and effective communication within the market. Consequently, the efficacy of destination image promotion hinges on communication strategies that authentically represent the destination's essence (Ashworth & Goodall, 1988). In this context, social media has become a crucial tool for communication.

5.2.2. Social Media and the Destination Image Projection

In recent years, the Internet has emerged as a critical channel for promoting the image of tourist destinations (Filieri et al., 2021). Joseph and Anandkumar (2021) propose that the content shared via social media channels managed by destination organizations can profoundly shape a destination's perception. According to Liu et al. (2024), destination marketers develop and adopt social media affordance strategies to cultivate and promote a positive image of their destination in the tourism market. As a result, the online content curated by DMOs serves as a pivotal resource for understanding the projected image of a destination (Choi et al., 2007).

Nevertheless, despite the importance of social media in promoting destination image, recent years have seen a decrease in scientific investigation focusing on the projected image, according to Wang et al. (2023). Conversely, research on electronic word-of-mouth (e-WOM) image—referring to the destination image conveyed through user-generated content (UGC) on electronic platforms such as social media and e-commerce websites—has experienced a notable increase. This trend indicates a need for more research on how DMOs can effectively use social media to communicate their image and influence e-WOM.

Social media platforms demonstrate considerable diversity in terms of their services, reach, and usage patterns. For instance, Twitter and Facebook are primarily characterized by textual and narrative content, as well as the accessibility of data (Huertas & Marine-Roig, 2016; Obembe et al., 2021). In contrast, Instagram stands out for its unique combination of evocative photographs with concise textual content, enhancing destination imagery and influencing public emotions (Filieri et al., 2021; Pasquinelli et al., 2022).

Huertas and Marine-Roig (2016) highlight that, typically, DMOs predominantly communicate attraction factors rather than emotional values on social media platforms. However, social media can effectively convey the emotional essence of a place, particularly through visual imagery. Supporting this notion, Huertas and Marine-Roig (2015) assert that incorporating specific emotional values into social media communication fosters greater interactivity, thereby enhancing the overall image of tourist destinations.

While the conventional understanding of destination image has proven valuable in analyzing the impact of advertising messages, there has been a notable lack of attention directed towards visual content (Choi et al., 2007). Visual elements such as pictures and

videos offer destinations the opportunity to convey their image and a diverse array of information in a condensed format (Choi et al., 2007; Pan et al., 2014). Mackay and Couldwell (2004) assert that photographs play a crucial role in effectively creating and communicating a destination's image. Whether generated by DMOs or users, destination photography serves as a medium for transmitting images that shape and reshape travelers' perceptions of destinations (Stepchenkova & Zhan, 2013). According to Pan et al. (2014), photographs have the capacity to communicate emotional values, although captions accompanying them are necessary to elucidate and clarify the intended meaning and associated feelings.

In this scenario, Instagram distinguishes itself as a social media platform that adeptly combines the evocative potential of photographs with concise yet meaningful textual content (Gon, 2020). Its unique differentiation, prioritizing visual content over textual elements, establishes it as a robust social media platform exceptionally suited for destination image projection. This platform has become synonymous with creating aesthetically pleasing images and influencing lifestyles (Statista, 2022). Its immense popularity is evidenced by advertisers potentially reaching about 1.318 billion users in 2023, positioning it as the fourth-largest social media platform (DataReportal, 2023).

Despite its widespread popularity, as highlighted by Gon (2020), a gap exists in research concerning Instagram. Social media research has primarily concentrated on textual content due to its ease of collection and processing compared to images. Therefore, delving into these functionalities is crucial for comprehending how Instagram facilitates and shapes communication with tourists through visual content.

5.2.3. Impact of COVID-19 on Destination Image Projection Via Social Media

According to Gössling et al. (2020), despite the occurrence of three pandemics in the 20th century and four in the 21st century, the impact and recovery from the COVID-19 pandemic have been unprecedented. Sigala (2020) highlights that the COVID-19 pandemic is distinct from previous crises in terms of its life cycle, nature, impacts, and policy responses, including the implementation of lockdowns and travel restrictions aimed at controlling the spread of the virus. These governmental measures have profoundly affected tourism, confining previously active travelers to their homes and generating significant negative emotions and stress (Lenggogeni et al., 2022). Consequently, the tourism sector underwent substantial transformations, necessitating the restructuring and repositioning of the destinations' image.

Gkritzali et al. (2018) propose that DMOs should promptly implement crisis management strategies immediately following the onset of a crisis to recover, sustain, and revitalize normative beliefs about the destination. During the global crisis, social media emerged as an important platform for disseminating tourism information and nurturing relationships (Gretzel et al., 2020). According to the literature (e.g., Gonzalez et al., 2021; Pachucki et al., 2022; Pasquinelli et al., 2022), DMOs sustained and strengthened their social media communication channels during this period. Faced with mobility restrictions, tourism destinations predominantly existed in the virtual sphere, compelling DMOs to maintain an active presence on social media platforms. However, the extended travel restrictions likely intensified emotional volatility among consumers, prompting tourist destinations to adjust their strategies to connect with their audiences (Lenggogeni et al., 2022).

The pandemic compelled the destinations to adopt a paradigm shift towards embracing more sustainable business models (Muritala et al., 2022). Pasquinelli et al. (2022) observed alterations in the brand attributes and values of certain Italian urban destinations prompted by the pandemic. These destinations began formulating more sustainable propositions, intensified brand communication efforts on social media platforms, and heightened emphasis on natural and environmental urban assets as well as outdoor activities. Similarly, Joseph and Anandkumar (2021) reported that the DMO of Iceland adopted a social media communication strategy, focusing on nature content, adventure, wellness, and natural phenomena.

By linking the literature on tourism destination images and social media, this study explores how DMOs projected the tourism destinations' image on Instagram to avoid tourists' risk perception during the COVID-19 pandemic.

5.3. Methodology

5.3.1. Research Questions

This study aims to analyze Portugal's tourism image projected on social media by the national DMO during the COVID-19 pandemic. To achieve this objective, the following research questions (RQs) are proposed:

RQ1: What are Portugal's predominant image attributes, as presented by the official DMO on Instagram, before, during, and after the COVID-19 crisis?

RQ2: What is the composition of Portugal's projected online image throughout the pandemic?

RQ3: Was there a notable change in the destination's image projection during the pandemic phases?

RQ4: How did users react to Portugal's image projection during the different phases of the pandemic?

5.3.2 Data Collection

Turismo de Portugal, the national DMO, was selected for this study due to its responsibility for internationally promoting and maintaining Portugal's image in foreign markets. The specific Instagram profile analyzed is "@VisitPortugal" (<https://www.instagram.com/visitportugal/>), where English is the primary language. Instagram was chosen as the social media platform for analysis based on research findings that underscore its effectiveness in projecting destination images (e.g., Filieri et al., 2021; Iglesias-Sánchez et al., 2020; Pasquinelli et al., 2022).

The study period spanned from September 1, 2019, to December 31, 2021. It was divided into three phases delineated based on the onset and easing of travel restrictions globally during the COVID-19 pandemic: Pre-lockdown, Lockdown, and Post-lockdown. The dates were selected in consideration of the World Health Organization's declaration of COVID-19 as a pandemic on March 11, 2020 (WHO, 2020), which prompted the implementation of travel restrictions starting in late March to early April 2020 (Avraham, 2021). The lockdown phase encompassed a period when many countries imposed comprehensive travel restrictions prohibiting tourist entry. Subsequently, as countries began to manage the pandemic by mid-June 2021, there was a notable decrease in infection rates and a relaxation of mobility restrictions, prompting the post-lockdown phase and the gradual return of tourism (UNWTO, 2022). Table 5.1 summarizes the content analyzed across different phases of the study period.

Table 5.1. Data Panel

Phase	Start Date	End Date	Post	Photo
1- Pre-lockdown	Sep 1, 2019	Mar 10, 2020	258	266
2 - Lockdown	Mar 11, 2020	Jun 15, 2021	318	333
3 - Pos-lockdown	Jun 16, 2021	Dec 31, 2021	137	164
Total			713	763

* Data collected on January 22,2021.

5.3.3. Category Development

Visual content analysis is the chosen research methodology in this study. It aimed to derive factual and descriptive insights from the images posted on social media platforms, with a specific focus on analyzing the composition and elements of the photographs rather than their contextualization (Filiari et al., 2021; Mak, 2017; Pasquinelli et al., 2022; Stepchenkova & Zhan, 2013). According to Bell (2004), visual content analysis employs a systematic and observational approach to examine how individuals, events, scenarios, and other subjects are depicted in media channels. This method categorizes observable content into predefined categories to quantify patterns and themes.

According to Sun et al. (2021), the categorization of destination image varies based on factors such as the tourist destination, market dynamics, and temporal context. Hence, a specific set of categories was devised to classify the cognitive images projected by Portugal's DMO, utilizing 10% of the selected photos spanning different pandemic phases, totaling 76 posts. This preliminary study conducted a content analysis to identify the primary attributes depicted in the photos of destinations. The theoretical framework for establishing these categories was drawn from previous studies (e.g., Beerli & Martín, 2004; Echtner & Ritchie, 1993; Huertas & Marine-Roig, 2016; Joseph & Anandkumar, 2021; Mak, 2017; Stepchenkova & Zhan, 2013).

Eleven categories were developed to represent the essential characteristics of the destination image. Table 5.2 presents a comprehensive coding guide. Additionally, Figure 5.1 provides an example of each visual category.

Table 5.2. Description of destination image categories and the coding unit

Category	Description	Coding Unit	Relevant literature
COVID-19 (C19)	Images directly related to the COVID-19 crisis, including safety measures, travel restrictions, and pandemic impact.	COVID-19	Joseph & Anandkumar (2021)
Culture & Art (C&A)	Cultural events, festivals, traditional crafts, music, art objects, and other expressions of local culture.	Folk culture/traditions, Festivities, Events, Art Object/Craft/Art Street, Traditional/festival costumes, Typical music style/dance, Flag/National, Symbols/language, Traditional Community	Stepchenkova & Zhan (2013); Huertas & Marine-Roig (2016)
Gastronomy (GA)	Local foods and drinks represent the culinary traditions of the destination.	Food/Cuisine, Drinks	Huertas & Marine-Roig (2016); Joseph & Anandkumar (2021); Mak (2017)
Infrastructure & Facilities (I&F)	Urban landscapes featuring city skylines, streets, monuments, and architectural landmarks. Transportation networks, tourism facilities, and support services include roads, airports, hotels, and information centers.	Infrastructure, Tourism facilities, Urban architecture, Urban Park/Square/Garden, Urban scenery	Echtner & Ritchie (1993); Beerli & Martín (2004); Hall (2009); Joseph & Anandkumar (2021)
Nature & Landscape (N&L)	Intact natural environments feature mountains, forests, parks, waterfalls, rivers, lakes, and other natural attractions.	Cave and grotto, Nature Park, Forest and jungle, Mountain, Natural scenery, Ocean/Coast, Rural landscape, Sky scenery, Waterfall, River, and Lake	Beerli & Martín (2004); Joseph & Anandkumar (2021); Mak (2017); Stepchenkova & Zhan (2013)
Others (OE)	Miscellaneous images not covered by the previous categories, including institutional advertisements and diverse visual content.	Other elements	Joseph & Anandkumar (2021)
Outdoor & Adventure (O&A)	Activities promoting an active lifestyle and appreciation of nature include hiking, kayaking, fishing, and ecotourism.	Sports, Leisure activities, Other activities	Huertas & Marine-Roig (2016); Stepchenkova & Zhan (2013)
Sun & Beach (S&B)	Scenes depicting beaches, sand, sea, and related recreational activities associated with coastal areas.	Sea/Beach/Sun	Beerli & Martín (2004); Huertas & Marine-Roig (2016)
People (PP)	Individuals or groups prominently featured in the photograph are engaged in activities relevant to the destination.	Single person, Social interaction, Other tourists	Mak (2017); Stepchenkova & Zhan (2013)
Tangible Heritage (TH)	Historical and cultural sites, including traditional buildings, monuments, archaeological sites, and religious structures.	Historical village, Monument and Statue, Religious Building or Object, Traditional Building, Historic Building, Historical/archaeological sites	Echtner & Ritchie (1993); Huertas & Marine-Roig (2016); Mak (2017); Stepchenkova & Zhan (2013);
Weather (WE)	Images illustrating weather conditions, including sunshine, clouds, rain, and seasonal changes.	Sun scenery, Weather conditions, Seasons	Beerli & Martín (2004); Echtner & Ritchie (1993); Mak (2017)



Figure 5.1. Pictorial examples of visual categories

5.3.4 Data Coding

Therefore, the entire dataset of 763 photos was coded. An inductive approach was adopted for visual content analysis in line with previous studies (e.g., Mak, 2017; Sun et al., 2021; Stephenkova & Zhan, 2013). Each photograph was treated as an independent unit of analysis (Krippendorff, 2018). Recognizing that photographs can encompass multiple themes, we adopted the approach of allowing each photograph to be coded into more than one category, aligning with established practices in visual research demonstrated in prior studies (e.g., Bell, 2001; Mak, 2017; Pan et al., 2014; Stephenkova et al., 2015; Stephenkova & Zhan, 2013). Therefore, each photograph had the flexibility to be categorized into up to four different categories. This methodological choice facilitated a comprehensive exploration of the varied thematic elements present in each image.

Following Collier's (2001) visual analytical framework, each photograph in the dataset was assigned a unique identifier and systematically analyzed based on its thematic content (see Figure 5.2). The categorization process involved evaluating both the visual content and accompanying captions, aligning with prior studies that underscore the significance of these components (Pan et al., 2014). Additional contextual cues, such as post content and hashtags, were also utilized to aid in the manual coding process. Subsequently, a thorough examination and coding procedure were conducted to identify underlying categories, focusing on cognitive dimensions.

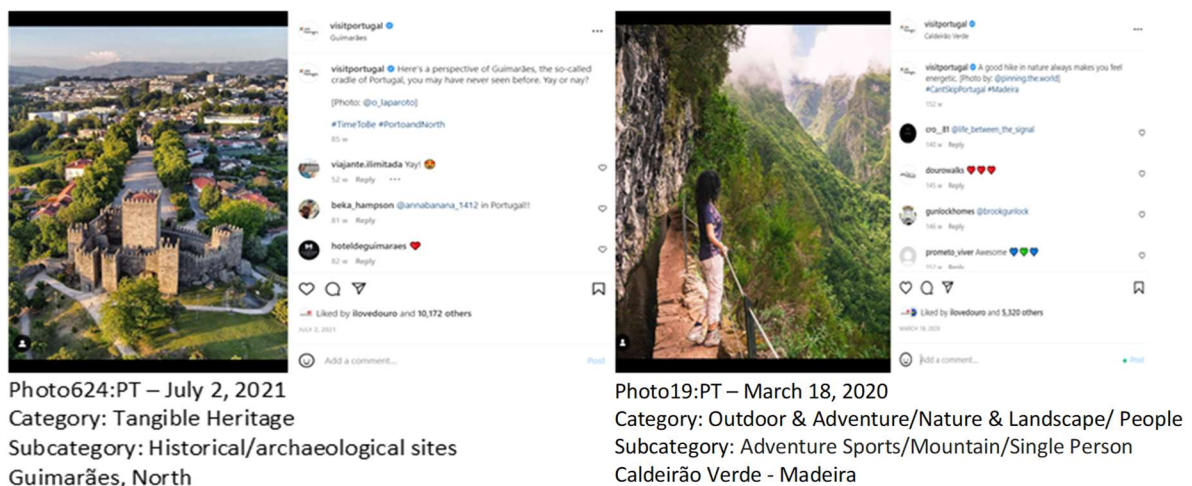


Figure 5.2. Examples of photographic coding

5.3.5 Data Analysis

The content analysis of 763 photos was elaborated in four steps (See Table 5.3):

First, a frequency analysis was performed, and the image projection was divided into three phases). The category frequency was calculated, and the proportion of each dimension was checked and discussed.

Second, a diagram was created using the co-occurrences analysis among destination attributes, adding the three pandemic phases to ascertain Portugal's overall image. This study relies on the one-to-many coding method proposed by Stepchenkova and Zhan (2013). The one-to-many coding method matches each visual image to several potential categories, capturing the entire picture and the connections among categories (Zuo et al., 2023). Each photograph was coded into up to four categories; for example, Figure 5.2 shows an image of a woman in the mountains coded into three dimensions: Natural & Landscape, People, And Outdoor & Adventure. The approach adopted was based on comparing the observed co-occurrences and the expected number of co-occurrences calculated under the attribute independence assumption. The probability of a target attribute appearing in a destination image was calculated using the ratio between the category frequency and the corresponding sample size. The number of co-occurrences of the two categories can illustrate the strength of associations/links between them (Li & Stepchenkova, 2012). When two coding units appeared simultaneously in their respective categories, the co-occurrence frequency was counted as one or more, indicating a direct link between the two units. If there was no simultaneous occurrence, the co-occurrence frequency was recorded as zero (Zuo et al., 2023). Therefore, a higher frequency of co-occurrences between the two categories indicated a stronger association. It is important to note that the decrease can significantly influence the expected number of co-occurrences in image frequency. This consideration is crucial for interpreting the results, as less frequent attributes tend to have a lower expected number of co-occurrences, potentially impacting the statistical outcomes (Stepchenkova et al., 2015). Given this, the chi-square test for independence was performed. A significance level (p -value < 0.05) was set to assess the statistical significance of the positive associations between images. The analysis was performed supporting R-4.3.0 software.

Third, a variation rate analysis of the relative frequency was performed to identify the differences in the attributes projection during the pandemic, following Pasquinelli and Trunfio (2022). The variation rate was calculated comparing pre-lockdown and lockdown, lockdown and post-lockdown, and post-lockdown and pre-lockdown.

Fourth, user engagement on Instagram was analyzed based on the number of likes and comments to identify the attributes most valued by the public. As discussed in the literature (Barbe et al., 2018; Hays et al., 2013; Oliveira & Huertas, 2019), engagement

encompasses interaction, influence, and relevance measures, including shares, likes, comments, and mentions. To assess potential changes in user engagement with DMO's content following the pandemic, a one-way analysis of variance (ANOVA) using the Kruskal-Wallis nonparametric test was conducted. Each phase was analyzed separately for the variables "Likes" and "Comments" to evaluate engagement differences. Statistical significance was set at $p < 0.05$. Data analysis was performed using IBM SPSS Statistics software.

Table 5.3. Research Strategy Summary

Research Question	Data Analysis
RQ1: What are Portugal's predominant image attributes on Instagram before, during, and after the COVID-19 crisis?	Frequency analysis
RQ2: What is the composition of Portugal's projected online image throughout the pandemic?	Co-occurrence analysis
RQ3: Was there a notable change in the destination's image projection during these phases?	Variation rate analysis
RQ3: How did users react to Portugal's image projection during the different phases of the pandemic?	One-way ANOVA, Kruskal-Wallis nonparametric

5.4. Findings

5.4.1. Frequency of Attributes and Variation Rate

Table 5.4 presents a frequency analysis of Portugal's image projection across three distinct periods related to the COVID-19 pandemic: Phase 1 (pre-lockdown), Phase 2 (lockdown), and Phase 3 (post-lockdown). The frequency reflects the repetitive occurrence of categories and coding units within the sample.

The datasets reveal that nature and landscape (N&L), as well as tangible heritage (TH), are predominantly represented in photographs across all phases of the pandemic. These findings are consistent with earlier research, such as Hunter (2008), which identified that the most frequent photographs pertain to heritage or material culture spaces inhabited by people and natural landscapes devoid of human presence. The N&L most frequently depicted are related to natural scenery and ocean/coast, while TH primarily includes historic buildings and religious structures. This emphasizes Portugal's image as a natural and historical destination, providing valuable insights into the DMO's behavior during the pandemic. This challenges the previous notion, as presented by Ramos et al. (2000), that the Portuguese tourism market predominantly focuses on the Algarve's "sun and beach product."

Table 5.4. Data frequency analysis

Category / Coding Unit	Fase 1 (n=266)		Fase 2 (n=333)		Fase 3 (n=164)	
	N	%	N	%	N	%
Nature & Landscape (N&L)	141	53%	156	47%	129	79%
Cave and grotto	0	0%	2	1%	0	0%
Nature Park	11	4%	10	3%	1	1%
Forest and jungle	2	1%	3	1%	1	1%
Mountain	11	4%	19	6%	6	4%
Natural scenery	49	18%	58	17%	36	22%
Ocean/Coast	33	12%	29	9%	44	27%
Rural landscape	14	5%	13	4%	21	13%
Sky scenery	1	0%	1	0%	8	5%
Waterfall, River, and Lake	20	8%	21	6%	12	7%
Sun & Beach (S&B)	26	10%	44	13%	11	7%
Sea/Beach/Sun	26	10%	44	13%	11	7%
Weather (WT)	33	12%	32	10%	11	7%
Sun scenery	18	7%	19	6%	7	4%
Weather conditions	6	2%	3	1%	1	1%
Seasons	9	3%	10	3%	3	2%
Gastronomy (GA)	11	4%	4	1%	12	7%
Food/Cuisine	9	3%	3	1%	10	6%
Drinks	2	1%	1	0%	2	1%
Outdoor & Adventure (O&A)	23	9%	24	7%	12	7%
Sports	13	5%	17	5%	7	4%
Leisure activities	5	2%	4	1%	3	2%
Other activities	5	2%	3	1%	2	1%
Infrastructure & Facilities (I&F)	56	21%	41	12%	20	12%
Infraestrutur	16	6%	9	3%	5	3%
Tourism facilities	15	6%	9	3%	5	3%
Urban architectures	2	1%	8	2%	0	0%
Park, square, and garden	8	3%	3	1%	2	1%
Urban scenery	15	6%	12	4%	8	5%
Tangible Heritage (TH)	105	40%	107	32%	55	34%
Historical village	17	6%	20	6%	6	4%
Monument and Statue	1	0%	5	2%	1	1%
Religious Building or Object	21	8%	30	9%	7	4%
Traditional Building	21	8%	16	5%	6	4%
Historic Building	27	10%	22	7%	23	14%
Historical/archaeological sites	18	7%	14	4%	12	7%
Culture & Art (C&A)	11	4%	2	1%	7	4%
Folk culture/traditional festivities	1	0%	0	0%	0	0%
Events	1	0%	0	0%	0	0%
Art Object/Craft/Art Street	8	3%	2	1%	7	4%
Traditional/festival costumes	0	0%	0	0%	0	0%
Typical music style/dance	1	0%	0	0%	0	0%
Flag/National	0	0%	0	0%	0	0%
Symbols/language	0	0%	0	0%	0	0%
Traditional community	0	0%	0	0%	0	0%
People (PP)	56	21%	57	17%	26	16%
Single person	43	16%	44	13%	19	12%
Social interaction	8	3%	12	4%	1	1%
Other tourists	5	2%	1	0%	6	4%
COVID-19 (C19)	0	0%	8	2%	0	0%
COVID-19	0	0%	8	2%	0	0%
Others (OT)	2	1%	20	6%	15	9%
Others	2	1%	20	6%	15	9%
Total	463	174%	495	149%	298	146%

The third main category is people (PP), aligning with findings by other authors such as Zuo et al. (2023), who observed that pictures featuring tourists or residents are significantly more common than those without. These photographs often depicted a single person. The results indicate that Portugal is attempting to attract tourists through consumption behaviors aimed at self-fulfillment in image construction, consistent with the findings of Zuo et al. (2023). On the other hand, it serves as a reminder for individuals to maintain social distancing to protect themselves and others during the COVID-19 pandemic. The goal of the DMO's message differed somewhat from that of other tourist destinations. As Mele et al. (2023) reported, the destination aimed to persuade people to defer any tourism activity and to demonstrate solidarity with the local population.

The category with the lowest representation is COVID-19 (C19). Consistent with the findings of Joseph and Anandkumar (2021), there was minimal content focused on the pandemic on Instagram. In addition, some of the least represented attributes were gastronomy (GA) and culture & art (C&A). This corroborates the observation in the literature (Choi et al., 2007; Hunter, 2008; Stepchenkova & Zhan, 2013; Mak, 2017; Pasquinelli et al., 2022) that local cuisine and gastronomy were absent or less represented in the images projected online by DMOs.

5.4.2. Analysis of Attribute Co-Occurrences

The construction of destination image diagrams aimed to provide a visual summary of the data and to enhance comprehension of the relationships between destination attributes projected on Instagram by the national DMO. Figure 5.3 visually represents the co-occurrence analysis of Portugal's image based on visual content shared on Instagram during all the COVID-19 phases. Complementing, Table 5.5 presents the co-occurrences of two distinct attributes and indicates statistical significance when this number significantly exceeds the expected value.

The statistical procedures employed in this study included co-occurrence analysis and Chi-square analysis. The bubbles represent the categories, and any links between them are annotated with two numbers: the number of co-occurrences of the two attributes and their respective significance values (p-value). A significance level of $p > 0.05$ was established to define the statistical confidence of these associations.

The diagram provides relevant information on the association between the analyzed attributes, highlighting which combinations present a higher observed frequency than expected based on the independence between the attributes. Determining statistical

significance is essential for identifying statistically relevant and reliable associations, allowing a deeper understanding of the co-occurrence patterns between the attributes in question (Li & Stephenkova, 2012).

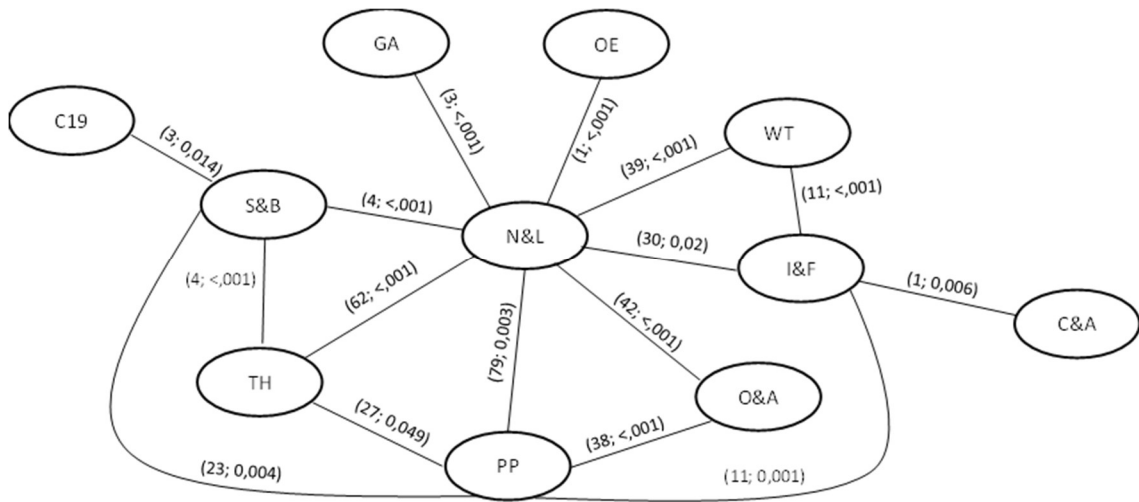


Figure 5.3. Diagram of Portugal's Destination Image
 Legend: Nature & Landscape (N&L), Gastronomy (GA), Outdoor & Adventure (O&A), Infrastructure & Facilities (I&F), Sun & Beach (S&B), Weather (WE), Tangible Heritage (TH), Culture & Art (C&A), People (PP), COVID-19 (C19), and Others (OE).

Table 5.5. Co-occurrence analysis of visual image categories

	N&L	S&B	WT	GA	O&A	I&F	TH	C&A	PP	C19	OE
N&L		4*	39*	3*	42*	30*	62*	1	79*	3	1*
S&B	4*		13	-	9	4	4*	-	23*	3*	-
WT	39*	13		1	7	11*	10	-	14	-	-
GA	3*	-	1		-	-	1	1	1	-	-
O&A	42*	9	7	-		6	4	-	38*	1	-
I&F	30*	4	11*	-	6		14	1*	11*	-	1
TH	62*	4*	10	1	4	14		1	27*	1	-
C&A	1	-	-	1	-	1*	1		4	-	-
PP	79*	23*	14	1	38*	11*	27*	4		2	-
C19	3	3*	-	-	1	-	1	-	2		-
OE	1*	-	-	-	-	1	-	-	-	-	

Note: * indicates p value <0.05

The analysis underscores the paramount importance of the three most frequently communicated attributes by the DMO: Nature and Landscape (N&L) with 426 occurrences, Tangible Heritage (TH) with 267 occurrences, and People (PP) with 139 occurrences. These attributes, which show significant positive associations, play a pivotal role in the DMO's promotional efforts. Moreover, they are significantly linked to the Sun and Beach (S&B) category, a prominent category with 81 occurrences, particularly during the lockdown (44).

N&L, with the highest number of positive relationships, emerges as a cornerstone of Portugal's DMO promotional strategy. It shows co-occurrences with nine attributes, particularly high co-occurrences with TH, PP, Outdoor and Adventure (O&A), and

Weather (WT). This underscores the importance of the Nature and Landscape attribute for Portugal, as most other attributes are associated with it. DMO's emphasis on the destination's natural beauty during the analyzed period indicates its promotional strategy.

PP is significantly associated with five categories: N&L, TH, O&A, S&B, and Infrastructure and Facilities (I&F). The findings align with other studies; for example, Stepchenkova and Zhan (2013) reveal that people in photos on social media are often associated with urban landscapes and tourism facilities. The literature (e.g., Choi et al., 2007; Stepchenkova & Zhan, 2013) suggests that including images of tourists and local people in destination promotions enhances the sense of life and authenticity in the virtual world.

The categories of Gastronomy (GA), Culture and Arts (C&A), and Others (OE) exhibited fewer statistically significant associations, indicating a lesser tendency for these attributes to be projected together.

Finally, the diagram illustrates that the COVID-19 (C19) category is positively associated solely with the S&B category. This suggests that the DMO intentionally avoided linking the destination's image with the pandemic during the analyzed period. These results indicate that the DMOs deliberately avoided negative emotional content, particularly expressions of sadness and regret, as recommended by previous studies (e.g., Mak, 2017; Pachucki et al., 2022). Conversely, the findings suggest that the DMO did not use Instagram to promote safety measures, such as encouraging people to stay at home or providing information about the pandemic, in contrast to the approach taken by other destinations as described by Mele et al. (2023).

5.4.3. The Impact of the COVID-19 Pandemic on Image Attributes

Subsequently, the variation rate analysis was conducted to explore the effect of the COVID-19 pandemic (before, during, and after lockdown) on visual category occurrence. The findings indicate both continuity and change in communication patterns observed on the social media platform (see Table 5.6).

Table 5.6. Variation rate of Portugal's image categories

Category	Phase			Variation Rate		
	1	2	3	(Phase 1 - Phase 2)	(Phase 2 - Phase 3)	(Phase 1 - Phase 3)
Nature & Landscape (N&L)	53%	47%	79%	-11%	68%	49%
Sun and Beach (S&B)	10%	13%	7%	30%	-46%	-30%
Weather (WE)	12%	10%	7%	-17%	-30%	-42%
Gastronomy (GA)	4%	1%	7%	-75%	600%	75%
Outdoor & Adventure (O&A)	9%	7%	7%	-22%	0%	-22%
Infrastructure & Facilities (I&F)	21%	12%	12%	-43%	0%	-43%
Tangible Heritage (TH)	40%	32%	34%	-20%	6%	-15%
Culture & Art (C&A)	4%	1%	4%	-75%	300%	0%
People (PP)	21%	17%	16%	-19%	-6%	-24%
COVID-19 (C19)	0%	2%	0%	Introduced	-100%	Absent
Others (OE)	1%	6%	9%	500%	50%	800%

The variation rate between Phases 1 and 2 indicates a negative variation rate in most categories, except for Sun and Beach (S&B), which experienced a positive rate (+30%). The Other (OE) category also showed a significant positive variation (+500%) due to intensified institutional campaigns. The COVID-19 (C19) category was introduced at the onset of the pandemic. Gastronomy (GA) and Culture & Arts (C&A) varied by -75%, attributed to the lockdown period when the DMO could not promote visits to restaurants, events, or indoor art venues, aligning with other studies (e.g., Pasquinelli et al., 2022; Mele et al., 2023). Additionally, the Portuguese organization posted more pictures without people than those with during Phase 2 (-19%), consistent with the findings of Mele et al. (2023). This indicates a strategic choice to showcase photos primarily featuring tourist places without people aiming to discourage travel. No images of nightlife, cultural activities, and people interaction were identified, which is prudent in a crisis (Sharp et al., 2022). Unexpectedly, there was an 11% decrease in emphasis on Nature and Landscape (N&L), contrary to previous studies (e.g., Joseph & Anandkumar, 2021; Pasquinelli et al., 2022), which highlighted the increased focus on natural and environmental assets and outdoor activities during the lockdown.

The post-lockdown period also demonstrated modifications in image communication relative to Phase 2. The C19 category, as expected, exhibited a negative variation (-100%), reflecting the reopening of Portugal's borders to tourists. The C&A category exhibited a substantial positive variation compared to lockdown (+300%), as did GA (+600%), indicating the DMO's intention to promote more experiential offerings to tourists. Additionally, the N&L category variation rate increased (+68%) post-lockdown, contrarily to S&B, which presented a negative variation (-46%).

Comparing Phase 3 to Phase 1, positive variation rates were observed in GA and OE (+78% and +800%, respectively). However, People (PP) experienced a negative variation (-24%) during the post-lockdown period compared to the pre-lockdown period. These findings diverge from other research, such as that of Zuo et al. (2023), who noted that Thailand emphasized safety, beauty, a healthy environment, and familial relationships for attracting tourists post-pandemic. The results highlight that after the pandemic, the Portuguese DMO emphasizes the destination's beauty by continuing to communicate the natural environment attribute on Instagram, as well as by including new attributes to promote the tourist experience.

5.4.4. User Engagement and Image Destination Category

Engagement through the number of "likes" and "comments" is used to identify digital audience interaction. Table 5.7 presents the average user engagement with the visual image categories projected on Instagram by Portugal DMO during the pandemic phases.

Table 5.7. Average engagement metrics during the different pandemic phases

Category	Phase 1		Phase 2		Phase 3	
	Like	Comment	Like	Comment	Like	Comment
Nature & Landscape (N&L)	7819	55	9053	86	8460	65
Sun and Beach (S&B)	8894	68	11514	120	9123	124
Weather (WE)	8867	68	8775	74	6820	67
Gastronomy (GA)	5463	80	9797	234	2736	34
Outdoor & Adventure (O&A)	8293	66	8811	90	6131	56
Infrastructure & Facilities (I&F)	10318	85	11474	114	16503	63
Tangible Heritage (TH)	9457	69	10042	91	8903	80
Culture & Art (C&A)	6521	48	10695	132	2082	10
People (PP)	8053	57	8709	79	8024	80
COVID-19 (C19)	-	-	9642	113	-	0
Others (OE)	6293	50	3771	24	3090	41

Across all phases, Infrastructure and Facilities (I&F), Sun and Beach (S&B), and Tangible Heritage (TH) garnered high engagement from social media users regarding likes and comments. The I&F category performed best, particularly in the number of likes. These results partially support previous research (e.g., Huertas & Marine-Roig, 2015; Mele et al., 2023), which indicates that this theme elicits the most reactions, suggesting that the public highly values this image category. Despite this, the I&F category was not widely represented in the DMO's posts on the social media platform during the analyzed period. The S&B category was highlighted primarily during the lockdown, indicating that the DMO effectively increased the prominence of this category of pictures on Instagram. TH was the third category with the most reactions and the second most projected.

Contrarily, the Others (OE) category exhibited the weakest performance throughout all the analyzed periods, and Gastronomy (GA), and Culture & Art (C&A) during pre- and post-lockdown. According to Huertas and Marine-Roig (2016), generic themes tend to elicit fewer reactions from the public. However, during the lockdown, C&A received significant user attention with a notable number of likes and comments. Stepchenkova and Zhan (2013) further highlight travelers' inclination to capture people in their natural environments and dress in traditional attire. Additionally, despite not garnering significant public engagement in terms of "likes," the GA category stands out for its high number of comments during the lockdown phase, averaging 234 comments per post. This finding aligns with Mele et al. (2023), who observed that Paris's Instagram posts featuring "Food and Beverage" received more comments during the pandemic.

An important observation is that, similar to the findings of Mele et al. (2023), the Outdoor & Adventure (O&A) and People (PP) categories received a low number of likes and comments during the lockdown. This suggests that the public was less interested in social intercourse and leisure pursuits during this period. Tourist spaces devoid of people are often described as pristine, well-maintained, and intentionally designed for tourist enjoyment (Hunter, 2008). According to Zuo et al. (2023), mountains with or without climbers, for example, can produce different images and generate different senses of place for tourists.

Interestingly, the findings show that the most projected attribute, Nature and Landscape (N&L), differs from the themes that generate the most reactions. This suggests that the number of engagements is not directly related to the representativeness of the photographs posted by the Portuguese DMO. The themes that elicit the most reactions from the public are diverse but generally correspond to the unique or characteristic attributes of destinations (Huertas & Marine-Roig, 2015). This may indicate an inconsistency between the content the DMO posts and how it is received by the digital audience.

The findings also indicate a shift in user engagement, with the average number of likes and comments significantly higher during the lockdown period compared to before and after. Table 5.8 provides a descriptive data analysis to compare engagement metrics across the periods before, during, and after the pandemic.

Table 5.8. Descriptive statistics of user engagement on Instagram

Phase	N	Engagement	Mínimo	Máximo	Média	Desvio padrão
Phase 1	266	Like	1576	23167	8474,5	3473,8
		Comment	8	325	64,2	50,3
Phase 2	333	Like	816	27300	9340,7	4033,3
		Comment	8	802	89,3	75,8
Phase 3	164	Like	734	88423	7478,3	7844,6
		Comment	3	258	66,8	52,6

Due to the data's abnormality, the conventional parametric one-way ANOVA was deemed inappropriate for this analysis. Given this, a standard nonparametric procedure, a Kruskal-Wallis test, was performed to evaluate the potential variation in user engagement with DMO's content during the pandemic (See Table 5.9).

Table 5.9. Kruskal-Wallis test

Engagement	χ^2	df	p
Comment	38.0	2	< .001
Like	51.3	2	< .001

The results of the Kruskal-Wallis test indicate significant differences among the phases for both the comment and like variables (Kruskal & Wallis, 1952). The increase in the χ^2 value signifies the greater significance of the differences observed between the phases, which is directly related to the probability of surpassing the significance level under the null hypothesis of no divergence between the phases.

Subsequently, the Dwass-Steel-Critchlow-Fligner (DSCF) test, a non-parametric method used for multiple comparison analyses, was employed to assess mean differences (Table 5.10).

Table 5.10. Dwass-Steel-Critchlow-Fligner (DSCF) test

Pairwise comparisons		Like		Comment	
		W	p	W	p
Phase 1	Phase 2	3.80	0.020	8.120	< .001
Phase 1	Phase 3	-7.41	< .001	0.249	0.983
Phase 2	Phase 3	-9.65	< .001	-6.114	< .001

Note: W = Wilcoxon rank sum test statistic; p < 0.05 values are considered statistically different.

The findings demonstrate notable differences in average comments between publications in Phase 1 and Phase 2, as well as between Phase 2 and Phase 3. However, no significant difference was found between Phase 1 and Phase 3. Regarding the "likes" variable, the test identified statistically significant differences across all pairs of

comparisons. Therefore, there is evidence of a statistically significant disparity between Phase 2 and the other phases, particularly concerning the number of comments received.

5.5. Discussion and Conclusion

This study analyzed Portugal's tourism image portrayed on Instagram by its official destination management organization and the audience's reaction to this communication during the COVID-19 pandemic spanning 2019 to 2021. Overall, the findings demonstrate the DMOs' adaptation to the crisis, reflected in the altered use of Instagram visual categories during the pandemic compared to the pre-pandemic period, as well as the changed behavior of the digital audience.

The data indicate that nature and landscape, tangible heritage, and people were prominently featured in the DMO's Instagram posts throughout the pandemic. The emphasis on nature and landscape is central to Portugal's DMO promotional strategy, highlighting the country's natural beauty and fostering a sense of vitality by incorporating people to evoke visitor interest and desire to visit post-crisis. The photographs frequently depicted individuals, suggesting a strategy aimed at personal engagement with tourists, focusing on consumption behaviors that lead to personal enrichment and individual experiences (Zuo et al., 2023).

Moreover, the DMO deliberately refrained from associating the destination's image with the pandemic. This approach aimed to maintain continuity with the destination's pre-pandemic representation and mitigate public perceptions of risk, aligning with prior research (Barbe & Pennington-Gray, 2018; Pachucki et al., 2022). However, there was limited content dedicated to gastronomy, culture, and art, suggesting these aspects were less integrated into the overall destination image during this period.

However, the analysis of engagement metrics for visual categories on Instagram during the COVID-19 pandemic reveals that Instagram users did not engage most with attributes typically associated with a tourism destination, such as nature and landscape, contradicting findings from previous studies (e.g., Huertas & Marine-Roig, 2015; Mele et al., 2023). Instead, the findings indicate that the digital audience highly valued different visual themes, including Infrastructure and Facilities, Sun and Beach, and Tangible Heritage. This suggests a potential inconsistency between the content posted by DMOs and how the digital audience perceives it. Consequently, DMOs' Instagram communication strategies should prioritize visual content that aligns closely with the destination's image and identity to enhance behavioral engagement (Kim & Kim, 2019).

The findings also indicate a shift in user engagement, with the average number of likes and comments significantly higher during the lockdown period compared to before and after, aligning with previous studies about crises (e.g., Barbe et al., 2018; Pachucki et al., 2022). As travel restrictions prevented visits to tourist attractions during the COVID-19 outbreak, there was an uptick in home entertainment through Instagram posts and videos. Social media functioned as a distraction mechanism, enabling users to engage with content that supported mental health initiatives during the crisis (Corrêa et al., 2024). Furthermore, Mele et al. (2023) suggest that social media users are more likely to interact with content featuring the iconic attributes or landmarks of tourism destinations during crises, which may explain the increased engagement observed. These results indicate that, in a crisis context, DMOs should enhance their social media communication efforts to distract the public and foster an emotional connection with them.

In adapting to the crisis, the findings demonstrate that the DMO adjusted its Instagram content strategy during the lockdown, leading to varying levels of audience engagement. The results indicate a higher frequency of Instagram posts without people compared to those depicting individuals during the lockdown. Additionally, there was a noticeable decrease in the representation of outdoor and adventure, gastronomy, and culture and arts categories in the DMO's posts. This reduction suggests a deliberate attempt to balance tourism promotion with governmental measures and restrictions aimed at mitigating the virus's spread, thereby mitigating the risk of over-tourism. Unexpectedly, there was a decrease in emphasis on Nature and Landscape, contrary to previous studies (e.g., Joseph & Anandkumar, 2021; Pasquinelli et al., 2022), which highlighted the increased focus on natural and environmental assets and outdoor activities during the lockdown.

The user engagement analysis indicates that the public response aligns with the strategy of reducing posts containing outdoor and adventure, and people, as these categories received low engagement during the lockdown. This suggests that the public was less interested in social interactions, crowded places, and leisure activities during this period (Joseph & Anandkumar, 2021; Pasquinelli et al., 2022; Solazzo et al., 2022). Complementing this, Mele et al. (2023) suggest that the unusual absence of visitors arguably enhanced a nostalgic view of tourist attractions.

However, the strategy to reduce the number of Instagram posts featuring gastronomy and culture and arts during the lockdown proved ineffective, as these attributes received significant user attention during that period. Scholarly literature (e.g., Mele et al., 2023;

Pasquinelli et al., 2022) highlights that intangible heritage, encompassing popular culture, traditions, and urban heritage, gained increased relevance during the pandemic. Markwick (2001) underscores tourists' desire to engage with the authentic daily life of local populations. Additionally, Mele et al. (2023) suggest that cultural heritage symbolically represents a simpler and more reassuring past that can assuage feelings of uncertainty during a crisis, potentially leading to higher engagement rates. Mak (2017) also notes that specific image categories, including food and drink, which are underrepresented in DMOs' data, are perceived by tourists as compelling and noteworthy, often cited as "top tourist experiences". This trend indicates that the lifestyles of locals have become pivotal to tourism activities, suggesting that destination management organizations may prioritize enhancing communication of the destination's way of life and popular culture in promotional efforts. Furthermore, DMOs could consider integrating photos related to gastronomy with other attributes, such as people, to enhance engagement and achieve more robust overall results.

In conclusion, the study offers insights into how Portugal's DMO adapted its Instagram strategy during the COVID-19 pandemic, emphasizing certain thematic elements while responding to shifting user engagement patterns. Aligning Instagram content with destination identity and incorporating diverse cultural elements could optimize engagement strategies and bolster destination promotion efforts in future crises.

5.5.1. Theoretical and Managerial Contribution

While prior studies have examined how destination management organizations project destination images using visual content on social media platforms (e.g., Bell, 2001; Mak, 2017; Pan et al., 2014; Stepchenkova & Zhan, 2013; Stepchenkova et al., 2015; Sun et al., 2021), research specifically within crisis contexts remains limited (Joseph & Anandkumar, 2021; Mele et al., 2023; Pasquinelli et al., 2022; Zuo et al., 2023). This study emerges as one of the pioneering investigations into visual content that focuses on how DMOs project destination images on social media platforms during prolonged crises. The study scrutinized the online promotional strategies of a tourist destination, distinguishing between periods of strict lockdown and phases with eased restrictions on leisure activities during the COVID-19 pandemic. Consequently, the research sheds light on how destinations strategize to project their image during prolonged crisis periods and provides insights into which themes garner the most interest from the digital public.

One theoretical contribution lies in identifying the imperative to strategically realign destination attributes in response to public sentiment during crises. As suggested by

Mele et al. (2023), social media use during crises should serve not only as a promotional tool but also fulfil pro-social purposes. Gastronomy, culture, and art emerge as focal points for social media users during such periods, offering a nostalgic escape from uncertainties. Conversely, public preference shifts away from social interactions, crowded locales, and leisure activities during crises, suggesting a need for DMOs to reduce social media posts featuring people. Priority is placed on emphasizing images of tourist spaces that are devoid of crowds, meticulously maintained, and intentionally designed for visitor enjoyment (Hunter, 2008).

This study also provides managerial insights for tourism destination organizations. DMO managers can glean valuable lessons for effective image communication during prolonged crises like COVID-19. The research underscores the impact of destination authenticity on engagement, highlighting the importance of marketing managers closely monitoring public perceptions on social media platforms. The findings offer guidelines and recommendations for enhancing tourist promotion through strategic selection of image attributes and visual content for posting on social media, both during crises and non-crisis periods, thus preparing for future challenges.

5.5.2. Limitations and Future Research

Despite the various contributions, the study has some limitations. First, the study sample is specific to one popular tourist destination. While this focus provides clear advantages in identifying best practices in crisis communication, it presents limitations concerning the generalization of results. Broader geographical coverage with a different and wider data set would offer further insights into visual image projection on social media during crisis periods. Second, the study was conducted over a limited period during the COVID-19 crisis. Although it distinguishes between times of strict lockdown and those with milder restrictions, extending observations to include the post-crisis period could yield different results and offer a more comprehensive understanding. Third, Instagram was the sole platform utilized for image projection analysis. Although it is regarded as a robust social media platform particularly well-suited for destination image projection (Gon, 2020), this exclusivity may have restricted the data and limited the comprehensive understanding of the communication process. Finally, despite the comprehensive guidelines provided by the codebook for coding the pre-defined visual categories, the involvement of only authors in the content analysis coding process might have introduced bias in the classification.

Future research should address these limitations by expanding geographical coverage and comparing other destinations. Extending the analysis period would allow researchers to investigate changes in image projection strategies and users' perceptions of destinations following the crisis. Additionally, incorporating different social media platforms could better assess the role and effectiveness of social media, considering the specificities of each platform and the potential of visual content in projecting destination images and influencing digital audiences during a crisis. In-depth interviews with DMOs' marketing managers and analysis of reports could be combined with the data to explore the decisions and processes behind the marketing strategies adopted and to compare the results achieved on social media. Moreover, since Instagram is considered a platform that influences public emotions (Fileri et al., 2021), scholars could also incorporate textual content analysis to examine how the affective dimension of destination image on DMOs' social media influences user engagement during a crisis, comparing it with the cognitive dimension. Finally, future research should consider a data collection procedure that combines the destination's projected image with the digital public's perceived image. Understanding public perceptions of a destination will help DMOs market their tourism offers more effectively to culturally diverse target markets.

Part III

Chapter 6 - Concluding Remarks

This chapter presents the concluding remarks of the thesis. It begins by summarizing the main conclusions, addressing the research objectives, and responding to the research questions outlined in the four studies included in Part II. The conclusion emphasizes the role of social media as an essential tool for managing crises, with particular attention to distraction strategies, which prove especially effective during extended crises such as the COVID-19 pandemic. Moreover, the dissemination of promotional content that underscores the safety of the destination emerges as a key approach. Instagram, in particular, is identified as a vital platform for tourist destinations due to its strong visual appeal and ability to elicit positive emotional responses. Additionally, the conclusion highlights the importance of projecting the local lifestyle through imagery to enhance destination appeal in a crisis context. Following this, the academic contributions and practical implications for destination management organizations are highlighted. The chapter concludes with a discussion of the study's limitations and offers recommendations for future research, identifying areas insufficiently explored and outlining potential avenues for further investigation.

6.1. Conclusion

The main conclusions of this thesis are summarized, encompassing the research objectives and providing answers to the research questions outlined in Chapter 1. Four studies were conducted to achieve this aim.

i. What are the implications of social media for the tourism industry during a crisis?

The study titled "Deciphering Social Media's Role in Tourism During Crises: A Scientific Examination" was conducted to address the first research question. The systematic literature review (SLR) facilitated an exploration of the field's evolution, underscoring the growing significance of social media in recent decades, particularly since the onset of the COVID-19 pandemic in 2020.

This chapter outlines the conceptual framework exploring the intersection of social media, crises, and tourism. The study identifies key research topics, integrating perspectives from both organizational and consumer viewpoints, thereby illuminating the evolving dynamics of crisis communication on social media. The findings underscore

the increasing importance of social media during the pandemic, revealing emerging themes such as the heightened focus on emotional content, resilience and adaptability, innovative response strategies, and the strategic deployment of social media influencers to restore a destination's image. Additionally, the study highlights the widespread use of social media data analysis techniques, such as sentiment analysis, during the analyzed period. According to Sharda et al. (2014), utilizing publicly available online data for sentiment analysis significantly reduces the costs, effort, and time required to manage large-scale public opinion surveys.

The results demonstrate that social media is becoming increasingly integral to the tourism industry, particularly in crisis contexts. The study identifies seven social media mechanisms that both consumers and organizations employ to navigate crises: (i) information, (ii) promotion, (iii) emotion, (iv) persuasion, (v) distraction, (vi) analytics, and (vii) innovation. Information mechanism refers to organizations' and consumers' use of social media to provide guidance and adjust information and seek instruction during a crisis. Promotion mechanism refers to organizations using social media to promote their products/services/brands in a crisis context. Emotion mechanism refers to consumers' and organizations' use of social media to help other actors cope with a crisis. Persuasion mechanism refers to consumers' and organizations' use of social media to influence others' actions in a crisis context. Distraction mechanism refers to consumers' use of social media to support mental health initiatives for coping with a crisis. Analytics mechanism refers to organizations using social media to gather valuable data and insights in a crisis. Innovation mechanism refers to organizations using social media to display different products/services/practices for coping with a crisis.

Each mechanism operates differently depending on the actor and the specific crisis context, yet they are not mutually exclusive; rather, they can complement and reinforce each other. This classification has the potential to enhance existing crisis management frameworks by incorporating a more action-oriented approach to media strategies, thereby bolstering organizational resilience to crises of varying magnitudes and complexities. However, despite the considerable body of literature identified, the practical application of theory remains in its early stages, particularly concerning the strategies adopted by destination management organizations.

ii. How can DMOs engage with stakeholders on social media during prolonged crises?

This question was addressed in the study "Emerging Strategies for Crisis Communication and Reputation Management in Tourist Destinations via Social Media Platforms." The research focused on the COVID-19 pandemic period and analyzed the official communications of two DMOs across three different social media platforms.

The study revealed a clear evolution in communication strategies and image management on social media, underscoring the need for tailored crisis response strategies for tourist destinations that complement those proposed by Situational Crisis Communication Theory (SCCT). After analyzing the selected cases, the findings identified five crisis response strategies employed by destination organizations to enhance public engagement and the effectiveness of crisis communication on social media platforms: (i) Distraction, (ii) Enhancing, (iii) Renewal, (iv) Transferring, and (v) Victimization. Notably, the study highlighted the emergence of the distraction strategy during the pandemic, particularly during lockdown periods when people were confined to their homes. A distraction strategy provides social media users with avenues to escape from the harsh realities of a crisis through entertainment, immersive experiences, and virtual tours.

The results also identified the types of messages employed by DMOs, which were classified into five categories: (i) Promotion, (ii) Information, (iii) Customer Service, (iv) Call-to-action, and (v) General. Among these, Promotion and Information were particularly prominent in the analyzed scenario. However, the DMOs' promotional efforts shifted away from product-centric messaging, focusing instead on promoting the destination's safety. Additionally, the distribution and characteristics of these messages varied across different digital platforms. Due to its visual appeal, Instagram generated the highest engagement, while Twitter was primarily utilized for crisis-related information and public support. Based on the research findings, the study proposes a set of new practices for tourist destination organizations in designing effective social media content during crises, integrating crisis communication strategies, message types, social media platforms, and media formats.

iii. What are the public's prevailing sentiments toward destination communications on various social media platforms during a prolonged crisis?

The study titled "Analyzing Digital Public Behavior in Response to Destination Management Organizations' Social Media Communications During a Crisis" was conducted in response to this question. This study aimed to examine digital public

behavior through sentiment analysis across various social media platforms managed by DMOs in Brazil and Portugal in response to the uncertainties introduced by the COVID-19 pandemic in the tourism sector. The findings indicate that an effective organization's social media communication enhances user engagement and mitigates the spread of negative emotions. This observation suggests that adopting a strategy of silence during challenging times is counterproductive for organizations (Hvass, 2013). The analysis also supports the idea that DMO communication during a crisis can potentially elevate positive emotions within the digital public.

The findings revealed significant differences across social media platforms, affirming Instagram's effectiveness in managing the image of tourist destinations during a crisis. Instagram users exhibited a notably positive perception of DMOs' communications, suggesting that this platform holds substantial potential for leveraging digital marketing benefits for tourist destinations, even amid a crisis. The results also suggest higher levels of engagement and loyalty on Instagram compared to Facebook and Twitter. Instagram users frequently use the platform as a means of distraction and resonate with the content shared by DMOs. The platform's emphasis on rich visual content has been shown to stimulate imagination and evoke positive emotions, particularly in image repair.

The study also uncovered notable differences in how digital audiences perceive various types of messages communicated by DMOs during an extended crisis such as COVID-19. Specifically, messages that offer distraction, promote destination safety, and evoke positive emotions were found to reduce risk perceptions and enhance engagement among digital audiences. Conversely, informative messages, which focused on pandemic-related content, were associated with negative sentiment, primarily due to their role in heightening risk perceptions. This insight contributes to formulating effective crisis response strategies on social media, underscoring the significance of nurturing organizational relationships with digital audiences.

iv. What strategic approaches does the destination employ to maintain its image during a crisis?

The final question of the thesis was addressed through the research titled "Adapting Tourism Promotion During Crisis: A Visual Content Analysis of Portugal's Instagram Strategy Amid COVID-19." This study analyzed Portugal's DMO's projection of its tourist image on Instagram and examined its marketing communication across three phases of the COVID-19 pandemic (pre-lockdown, lockdown, and post-lockdown). The study highlights the importance of aligning social media content with the destination's identity,

demonstrating how the destination's image is constructed. The DMO's promotional strategy for Portugal emphasizes nature and landscape, showcasing the country's natural beauty and incorporating imagery of people to evoke visitor interest and stimulate a desire to visit the country post-crisis.

The study highlights how the organization's strategy adapted during the pandemic, noting a significant reduction in publications depicting individuals and representations of outdoor and adventure activities, gastronomy, and culture during the lockdown. The DMO intentionally avoided associating the destination's image with the pandemic. Additionally, the results show a notable increase in user engagement during the lockdown period compared to before and after. With travel restrictions limiting visits to tourist attractions, there was a rise in home entertainment through Instagram posts and videos, coupled with a greater appreciation for local and straightforward lifestyles. During the crisis, the emphasis on intangible cultural heritage and gastronomy contributed to nostalgia for a simpler, more peaceful past (Mele et al., 2023), potentially leading to higher engagement rates. This trend suggests that local lifestyle has become integral to tourism activities, indicating that DMOs should prioritize the promotion of gastronomy, arts, and popular culture in their crisis communication strategies.

In summary, the thesis objective of "analyzing the strategic role of social media for DMOs in facilitating communication and managing image during crisis situations" was successfully met. The research concluded that organizations should remain active and enhance their marketing communication during crises by closely monitoring digital public behavior to avoid spreading negative emotions and mitigate risk perceptions. It demonstrated that public attributions regarding a crisis impact a destination's reputation and evoke specific emotions.

Moreover, the research advances beyond simplistic, organization-centric communication models that focus primarily on crisis responsibility or reputation and infer user reactions in a structuralist manner. A critical insight is that analyzing social media content offers valuable information about audience needs and how well these needs are being addressed. While Twitter is often highlighted in the literature as the primary platform for crisis communication, Instagram emerged as a crucial tool for tourist destinations due to its visual appeal and capacity to evoke positive emotions. The research identified the distraction strategy as particularly significant, especially during prolonged crises like COVID-19, as it provides users with a temporary escape from harsh realities through entertainment and immersive experiences. Additionally, there was a notable shift in promotional content from emphasizing the product to focusing on the

destination's safety, highlighting strengths in protecting both locals and tourists and conveying an image of cleanliness and safety. This approach allows the destination to maintain its presence, promote its brand, and establish emotional connections with consumers.

6.2. Contribution to Knowledge and Theory

The thesis offers several significant theoretical contributions:

(i) Firstly, the thesis substantially contributes to the literature by systematically reviewing the scientific production on the interplay between social media, tourism, and crisis. This review identifies critical topics from organizational and consumer perspectives. The findings highlight the increasing significance of social media in crisis contexts, with a particular emphasis on its role during the COVID-19 pandemic.

(ii) This research represents a pioneering effort in developing a conceptual framework that delineates the impact of social media on the tourism sector during crisis scenarios, providing a foundational basis for future research. Unlike previous studies that predominantly focus on the role of social media in disseminating information, promotional activities, and monitoring consumer behavior during crises, this research identifies seven distinct mechanisms—Information, Promotion, Emotion, Persuasion, Distraction, analytics, and Innovation. It also establishes correlations between these mechanisms and their potential effects during crises. This classification has the potential to enhance existing crisis management frameworks by introducing a more action-oriented perspective in media strategies, thereby bolstering organizational resilience to crises of varying magnitudes and complexities.

(iii) Through an extensive literature review, this research has offered a comprehensive roadmap for future research, facilitating academics' navigation of the evolving landscape of crisis communication and image restoration in the digital era. This contribution significantly advances theoretical developments in the field of tourism.

(iv) This research introduces a conceptual model for evaluating the effectiveness of communication strategies employed by DMOs on social media platforms during prolonged crises. This model integrates communication characteristics, content nature, and user reactions. It demonstrates broad applicability across diverse cultural, social, and economic contexts, rendering it a valuable tool for researchers in the field.

(v) This research expanded the scope of the leading crisis theories to better account for the unique dynamics of social media and the communication strategies employed by tourist destinations during extended crises. This effort led to an extension of the SCCT framework to include five distinct Reputation Repair responses: Distraction, Enhancing, Renewal, Transferring, and Victimization. The introduction of these novel strategies offers promising directions for future research in similar contexts. Notably, the Distraction strategy, which emerged as particularly relevant during the COVID-19 pandemic, represents a significant addition to existing models and provides new insights into crisis communication.

(vi) This research addresses the critical need for effective communication strategies for DMOs during prolonged crises by developing a comprehensive framework for practical communication. This framework integrates various digital platforms, crisis communication strategies, message typologies, and media resources. It enhances academic understanding of DMOs' social media responses and image management during crises and aids in crafting tailored messages for different stakeholder groups.

(vii) This research reaffirms that the vast amounts of data generated by social networks present a unique opportunity to extract valuable insights. Given the challenges associated with analyzing short-text data, such as social media comments, this research extends the use of advanced data science methodologies for knowledge extraction. The research demonstrates that analyzing social media comments can markedly enhance the effectiveness of crisis communication.

(viii) This investigation enriches the literature by integrating consumer- and supplier-centric perspectives. It distinguishes itself by examining the pivotal role of social media strategies during crises and analyzing user-generated content in response to DMOs' communications. This contribution provides insights into the behavior and needs of digital audience. The findings offer a basis for follow-up research, building on content studies to assess audience responses to messages during crises, triggers for social media engagement, and scenarios emerging from communication strategies.

(ix) This thesis represents a pioneering investigation into the role of online visual content during crises. It elucidates how destinations develop online marketing strategies to project their image amidst prolonged crises. It also identifies themes that generate significant interest from the digital public, such as gastronomy, culture, and art, which provide a nostalgic escape from uncertainty. These findings advance the literature on

destination image projection, offering new insights into effective online marketing strategies in a crisis.

(x) This research broadens social media analysis beyond the predominantly studied platform of Twitter. Investigating multiple platforms reveals significant differences between them and uncovers distinct patterns of user behavior. The research highlights Instagram as particularly effective for digital marketing and destination image recovery in a crisis context. These previously unexplored contributions open new avenues for further research, offering opportunities to examine and understand the roles of various social media platforms in crisis management.

(xi) Finally, this thesis enriches the existing body of knowledge by providing a comprehensive analysis of communication executions and strategies during prolonged crises. It bridges the gap between crisis communication theories and general social media marketing strategies employed by DMOs, thereby enhancing our understanding of effective communication practices in crisis contexts.

6.3. Managerial Implications

The results of this thesis offer valuable insights for professionals in destination management organizations. This knowledge can aid in developing social media communication strategies that enhance organizational relationships with digital audiences, support image recovery, and effectively promote tourist destinations.

(i) This research highlights that social media can influence policy changes and the development of innovative solutions for crisis management by raising awareness of existing policy deficiencies and advocating for improvements.

(ii) This research underscores the critical importance of utilizing social media as a communication tool during extended health crises, emphasizing its interactive potential and the risks of neglecting communication amid uncertainty. It serves as a model for destination organizations by drawing on the experience of Portugal's DMO, which achieved significant recovery due to adept image management.

(iii) Tourism industry professionals can gain valuable insights into the role of social media in communication and image recovery. Central to these insights is the need for destinations and organizations to move beyond reactive strategies and ad hoc responses, adopting a more innovative and emotion-driven approach to planning.

(iv) The pandemic necessitated a shift in content strategy, characterized by a reduction in marketing-focused messages about products and an increased emphasis on emotionally resonant content. The distraction strategy proves particularly significant in a crisis context, with organizations contributing by providing entertainment and immersive experiences. For instance, promotional messages can feature regional delicacies, local legends, and virtual tour experiences through linked websites. Additionally, organizations can utilize factual information and call-to-action messages to engage and redirect public attention during the crisis. This strategy can be effectively implemented across the three primary social media platforms, focusing on presenting visually appealing content to capture users' interest.

(v) This research demonstrates that, in addition to delivering instructive information, providing emotional support is essential during crises, as individuals often experience heightened vulnerability and uncertainty. Therefore, it is recommended that organizations enhance the dissemination of emotionally resonant content and provide consumer support through social media platforms.

(vi) This thesis presents targeted recommendations for organizations on managing crisis communication and reputation through social media during prolonged crises. It offers a valuable framework that integrates crisis communication strategies, message types, social media platforms, and content formats. Additionally, it advocates for a shift towards more strategic and proactive response approaches in crisis management.

(vii) This research guides organizations in selecting the types of messages (Promotion, Information, Customer Service, Call-to-action, and General) and social media platforms most valued by the public in a crisis, thereby offering valuable information for effective communication strategies for tourism destinations. Success on social media during crises depends not solely on organizational messages but also on understanding and addressing public needs. The promotional and emotional content of messages is vital for destination organizations. Social media users perceived promotional content as engaging and reassuring, rather than overtly commercial. Inspirational and emotional content was especially valued during periods of uncertainty.

(viii) This research highlights the significance of destination authenticity in driving engagement and underscores marketing managers' need to monitor public perceptions on social media platforms closely. Gastronomy, culture, and art emerge as important points for social media users, providing a nostalgic escape from uncertainty. Conversely, public preference shifts away from social interactions, crowded places, and leisure

activities during crises. This shift suggests that DMOs should minimize social media posts featuring people and instead focus on showcasing uncrowded tourist spaces, well-maintained and designed to enhance the visitor experience.

(ix) Lastly, Instagram emerged in this research as an effective platform for managing the image of tourist destinations during a crisis. Marketers can leverage this platform to enhance the destination's appeal and foster emotional connections with the digital public.

6.4. Limitations and Future Research

Although this research has produced consistent and robust results that can be accurately interpreted, it also has limitations. Some of these limitations highlight opportunities for further investigation and suggest potential directions for future research.

The first limitation pertains to the SLR conducted in Chapter 2. Although the review utilized two prominent scientific literature databases, Scopus and Web of Science, relevant articles may exist in other academic databases. Additionally, the analysis focused exclusively on peer-reviewed articles, potentially overlooking valuable insights from other academic formats, such as conference papers and theses/dissertations. Moreover, the keywords and inclusion/exclusion criteria used may have inadvertently restricted the sample, as evidenced by the omission of the term "hospitality," which is pertinent to many studies on hospitality organizations. Future research should encompass a wider range of sources and explore alternative keywords to address these limitations.

The empirical studies presented in Chapters 3 and 4 are subject to certain limitations. Firstly, the analysis was confined to a specific and relatively short period. While this timeframe was useful for identifying communication strategies and understanding user behavior during the crisis, it limits the scope of the data. Extending the analysis period and segmenting the crisis into distinct phases could enhance the accuracy of theoretical exploration and empirical findings, offering more detailed insights into the crisis phases (Aliperti et al., 2019). Secondly, the study's sample size is limited to two tourist destinations, which, although allowing for an in-depth examination of crisis communication best practices, restricts the generalizability of the results. Additionally, the temporary suspension of social media communication in Brazil during the study period may have influenced the collected data. A broader geographical scope and a more extensive, diverse dataset would provide a more comprehensive understanding of crisis

communication dynamics. Lastly, the analysis was restricted to data available on DMOs' social media platforms, which limited the ability to gain deeper insights into consumer profiles and travel intentions.

In Chapter 5, the study's sample is concentrated on a specific popular tourist destination, which, while facilitating the identification of best practices in crisis communication, limits the generalizability of the results. Expanding the geographical scope and incorporating a more diverse dataset could provide a broader understanding of visual image projection on social media during times of uncertainty. Another limitation is the inability to collect and analyze data from Instagram Stories, as these posts disappear after 24 hours. Since Instagram Stories are increasingly popular among users (Huertas, 2018), their exclusion could restrict the analysis of the destination's online marketing strategies. Future research should address these limitations by including a wider range of destinations and social media content types to enhance the reliability and validity of the analysis.

In addition to the suggestions to address the study's limitations, several topics remain underexplored, presenting opportunities for future research. Scholars could examine whether and how user comments on DMOs' social media content influence perceptions of the communicated messages. Additionally, exploring communication networks during crises could provide valuable insights. Research could focus on identifying influential actors and opinion leaders within these networks, enabling organizations to leverage these figures in their crisis communication strategies and social media marketing efforts.

Additionally, further survey studies could provide deeper insights into public behavior by examining variables such as trust, satisfaction, perceived source credibility, and media richness. Understanding the impact of these factors on visit intentions and overall engagement could enhance strategic planning for DMOs.

Moreover, there is a significant gap in research concerning tourists' information-seeking behaviors during crises, such as those occurring at destinations. Specifically, how risk perceptions influence the likelihood of international tourists seeking information from DMOs' social media accounts during crises remains underexplored. Future research could address these gaps to provide a more comprehensive understanding of tourists' behavior and decision-making processes in crisis contexts.

Further research could involve conducting in-depth interviews with DMO marketing managers and analyzing internal reports. This approach would offer valuable insights

into the decision-making processes and strategic considerations behind the marketing strategies adopted and allow for a comparison with the outcomes observed on social media platforms.

Additionally, while existing research has predominantly focused on Twitter for crisis communication, this thesis highlights Instagram's potential as a crucial tool in crisis management. Scholars should explore Instagram's role in greater depth, specifically its effectiveness in managing and recovering the image of destinations during crises. This would provide a more comprehensive understanding of how Instagram can be utilized for effective destination image management and crisis response strategies.

Finally, future research should integrate a data collection approach that contrasts the projected image of the destination with the image perceived by the digital public. Gaining insights into public perceptions will enable DMOs to tailor their marketing strategies more effectively to diverse cultural markets. Additionally, expanding the analysis to encompass both pre- and post-crisis periods would provide a more comprehensive view of how crisis communication impacts the destination's image over time.

References

- Aguado-Correa, F., Rabadán-Martín, I., & Padilla-Garrido, N. (2022). COVID-19 and the accommodation sector: first measures, and online communications strategies. A multiple case study in a Spanish province. *Investigaciones Turísticas*, 24, 172–197. <https://doi.org/10.14198/INTURI2022.24.9>
- Aliperti, G., Sandholz, S., Hagenlocher, M., Rizzi, F., Frey, M., & Garschagen, M. (2019). Tourism, crisis, disaster: an interdisciplinary approach. *Annals of Tourism Research*, Vol. 79. <https://doi.org/10.1016/j.annals.2019.102808>
- Arlikatti, S., Taibah, H. A., Maghelal, P., Andrew, S. A., & Alkhurayyif, S. A. (2022). Hajj Pilgrims' Perceptions of Trust and Internet Use for (Emergency) Information. *International Journal of Religious Tourism and Pilgrimage*, 10(1), 21–34. <https://doi.org/10.21427/52sx-7b16>
- Ashworth, G., & Goodall, B. (1988). *Marketing in the tourism industry the promotion of destination regions* (1st ed.). Routledge
- Austin, L., & Jin, Y. (Eds.). (2017). *Social media and crisis communication: Explicating the Social-Mediated Crisis Communication Model* (1st ed.). Routledge.
- 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. <https://doi.org/10.1080/00909882.2012.654498>
- Avraham, E. (2021). Recovery strategies and marketing campaigns for global destinations in response to the COVID-19 tourism crisis. *Asia Pacific Journal of Tourism Research*, 26 (11), 1255–1269. <https://doi.org/10.1080/10941665.2021.1918192>
- Avraham, E., & Ketter, E. (2017). Destination image repair while combatting crises: tourism marketing in Africa. *Tourism Geographies*, 19(5), 780–800. <https://doi.org/10.1080/14616688.2017.1357140>
- Azer, J., Blasco-arcas, L., & Harrigan, P. (2020). #COVID-19: Forms and drivers of social media users' engagement behaviour toward a global crisis. *Journal of Business Research*, 135 (1), 99–111. <https://doi.org/10.1016/j.jbusres.2021.06.030>
- Baksi, A. K., Parida, B. B., & Mahapatra, S. S. (2022). Application of Social Media Analytics in Assessing Decision Insights of Tourists under Disruption. *NMIMS Management Review*, 30(02), 58–81. <https://doi.org/10.53908/nmmr.300204>
- Balińska, A., & Jaska, E. (2022). The utility of media-delivered information for Generation Z travelers from Poland in the Covid-19 pandemic. *Ekonomia i Prawo*, 21(1), 25–44. <https://doi.org/10.12775/eip.2022.002>
- Baloglu, S., & McCleary, K. W. (1999). U.S. international pleasure travelers' images of four Mediterranean destinations: A comparison of visitors and nonvisitors. *Journal of Travel Research*, 38(2), 144–152. <https://doi.org/10.1177/004728759903800207>
- Barbe, D., & Pennington-Gray, L. (2018). Using situational crisis communication theory to understand Orlando hotels' Twitter response to three crises in the summer of 2016. *Journal of Hospitality and Tourism Insights*, 1(3), 258–275. <https://doi.org/10.1108/JHTI-02-2018-0009>
- Barbe, D., Pennington-Gray, L. (2020). Social Media and Crisis Communication in Tourism and Hospitality. In: Xiang, Z., Fuchs, M., Gretzel, U., Höpken, W. (Eds) *Handbook of e-Tourism*. Springer, Cham. <https://doi.org/10.1007/978-3-030->

- Barbe, D., Pennington-Gray, L., & Schroeder, A. (2018). Destinations' response to terrorism on Twitter. *International Journal of Tourism Cities*, 4(4), 495–512. <https://doi.org/10.1108/IJTC-04-2018-0027>
- Bardin, L. (1977). *Análise de conteúdo*. Lisboa edições.
- Becken, S., Friedl, H., Stantic, B., Connolly, R. M., & Chen, J. (2021). Climate crisis and flying: social media analysis traces the rise of “flightshame.” *Journal of Sustainable Tourism*, 29(9), 1450–1469. <https://doi.org/10.1080/09669582.2020.1851699>
- Berli, A., & Martín, J. D. (2004). Factors influencing destination image. *Annals of Tourism Research*, 31(3), 657–681. <https://doi.org/10.1016/j.annals.2004.01.010>
- Bell, P. (2001). Content analysis of visual images. In T. van Leeuwen, & C. Jewitt (Eds.), *Handbook of visual analysis* (pp. 10–34). London: Sage.
- Boote, D.N. & Beile, P. (2005). Scholars before researchers: on the centrality of the dissertation literature review in research preparation. *Educational Researcher*, 34(6), 3-15. <https://doi.org/10.3102/0013189X034006003>
- Brodie, R. J., Hollebeek, L. D., Jurić, B., & Ilić, A. (2011). Customer Engagement: Conceptual Domain, Fundamental Propositions, and Implications for Research. *Journal of Service Research*, 14(3), 252 - 271. <https://doi.org/10.1177/1094670511411703>
- Bui, V., Alaei, A. R., Vu, H. Q., Li, G., & Law, R. (2022). Revisiting Tourism Destination Image: A Holistic Measurement Framework Using Big Data. *Journal of Travel Research*, 61(6), 1287–1307. <https://doi.org/10.1177/00472875211024749>
- Canhota A., & Wei, L. (2021). Stakeholders of the world, unite!: Hospitality in the time of COVID-19. *International Journal of Hospitality Management*, 95 (1). <https://doi.org/10.1016/j.ijhm.2021.102922>
- Carvache-Franco, O., Carvache-Franco, M., & Carvache-Franco, W. (2022a). Coastal and marine topics and destinations during the COVID-19 pandemic in Twitter's tourism hashtags. *Tourism and Hospitality Research*, 22(1), 32–41. <https://doi.org/10.1177/1467358421993882>
- Carvache-Franco, O., Viquez-Paniagua, A. G., Carvache-Franco, M., Pérez-Orozco, A., & Carvache-Franco, W. (2022b). Risk perception and crisis communication during the Covid-19 pandemic: Analysis based on Twitter hashtags. *Tec Empresarial*, 16(3), 72–91. <https://doi.org/10.18845/te.v16i3.6372>
- Chen, H., Huang, X., & Li, Z. (2020). A content analysis of Chinese news coverage on COVID-19 and tourism. *Current Issues in Tourism*, 25(2), 198–205. [doi:10.1080/13683500.2020.1763269](https://doi.org/10.1080/13683500.2020.1763269)
- Chen, Y., Zhang, Z., & Wang, T. (2022). Dire Straits: How tourists on the Diamond Princess cruise endured the COVID-19 crisis. *Tourism Management*, 91. <https://doi.org/10.1016/j.tourman.2022.104503>
- 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. <https://doi.org/10.1111/1468-5973.12130>
- Cheng, Y. (2020). The social-mediated crisis communication research: Revisiting dialogue between organizations and publics in crises of China. *Public Relations Review*, 46, Article 101769. [10.1016/j.pubrev.2019.04.003](https://doi.org/10.1016/j.pubrev.2019.04.003).
- Choi, S., Lehto, X. Y., & Morrison, A. M. (2007). Destination image representation on the web: Content analysis of Macau travel related websites. *Tourism*

- Management*, 28(1), 118–129. <https://doi.org/10.1016/j.tourman.2006.03.002>
- Clement, J. (2020). Number of global social network user (2017-2025). <https://www.statista.com/statistics/278414/number-of-worldwide-social-network-users/>.
- Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Sciences* (2nd ed.). Routledge. <https://doi.org/10.4324/9780203771587>
- Collier, M. (2001). Approaches to analysis in visual anthropology. In T. van Leeuwen, & C. Jewitt (Eds.), *Handbook of visual analysis* (pp. 35-60). London: Sage.
- Coombs, W. T. (1998). An Analytic Framework for Crisis Situations: Better Responses From a Better Understanding of the Situation. *Journal of Public Relations Research*, 10(3), 177–191. https://doi.org/10.1207/s1532754xjpr1003_02
- Coombs, W. T. (1999). *Ongoing crisis communication: Planning, managing, and responding*. Sage.
- 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. <https://doi.org/10.1057/palgrave.crr.1550049>
- Coombs, W. T. (2015). The value of communication during a crisis: Insights from strategic communication research. *Business Horizons*, 58(2), 141–148. <https://doi.org/10.1016/j.bushor.2014.10.003>
- Coombs, W.T. (2018). *Ongoing Crisis Communication: Planning, Managing, and Responding*. Sage.
- Corrêa, C. C., Alves, H. M. B., & Santos Estevão, C. M. (2024). Deciphering social media's role in tourism during crises: a scientific examination. *Current Issues in Tourism*, 1–24. <https://doi.org/10.1080/13683500.2024.2360677>
- Crompton, J. L. (1979). An Assessment of the Image of Mexico as a Vacation Destination and the Influence of Geographical Location Upon That Image. *Journal of Travel Research*, 17(4), 18–23. <https://doi.org/10.1177/004728757901700404>
- DataReportal. (2023). *Instagram statistics and trends*. <https://datareportal.com/essential-instagram-stats>.
- Demo, P. (2000). *Metodologia do Conhecimento Científico*. São Paulo: Atlas.
- Denyer, D., & Tranfield, D. (2009). Producing a systematic review. In Buchanan, D. & Bryman, A (Eds). *The SAGE handbook of organizational research methods*. Sage Publications.
- Dimitriou, L., & Antoniou, C. (2017). Monitoring social network formation and information content analysis of transport anomalies: The case of airline crashes. *Journal of Air Transport Management*, 65, 127–141. <https://doi.org/10.1016/j.jairtraman.2017.09.011>
- DiStaso, M. W., McCorkindale, T., & Wright, D. K. (2011). How public relations executives perceive and measure the impact of social media in their organizations. *Public Relations Review*, 37(3), 325–328. <http://dx.doi.org/10.1016/j.pubrev.2011.06.005>
- du Plessis, C. (2018). Social media crisis communication: Enhancing a discourse of renewal through dialogic content. *Public Relations Review*, 44, 829–838. <https://doi.org/10.1016/j.pubrev.2018.10.003>
- Duan, J., Xie, C., & Morrison, A. M. (2021). Tourism Crises and Impacts on

- Destinations: A Systematic Review of the Tourism and Hospitality Literature. *Journal of Hospitality and Tourism Research*, 46(4), 667-695.
<https://doi.org/10.1177/1096348021994194>
- Durkheim, F. (1999). *Da divisão do trabalho social*. São Paulo: Martins Fontes.
- Ebrahimi, P., Hajmohammadi, A., & Khajeheian, D. (2020). Place branding and moderating role of social media. *Current Issues in Tourism*, 23(14), 1723–1731.
<https://doi.org/10.1080/13683500.2019.1658725>
- Echtner, C.; Ritchie, J. (1993). The Measurement of Destination Image: An Empirical Assessment. *Journal of Travel Research*, 31(4), 3-13.
<http://dx.doi.org/10.1177/004728759303100402>
- Eckhardt, D., Leiras, A., & Thomé, A. M. T. (2019). Systematic literature review of methodologies for assessing the costs of disasters. *International Journal of Disaster Risk Reduction*, 33, 398-416. <https://doi.org/10.1016/j.ijdrr.2018.10.010>
- Erragcha, N., & Babay, H. (2022). Effects of Media Coverage and Perceived Risk during COVID-19: Moderated Mediation Model. *African Journal of Hospitality, Tourism and Leisure*, 11(6), 1824–1841. <https://doi.org/10.46222/ajhtl.19770720.327>
- Fakeye, P. C., & Crompton, J. L. (1991). Image Differences between Prospective, First-Time, and Repeat Visitors to the Lower Rio Grande Valley. *Journal of Travel Research*, 30(2), 10-16. <https://doi.org/10.1177/004728759103000202>
- Fávero, L. P. L., & Belfiore, P. P. (2017). *Manual de análise de dados: estatística e modelagem multivariada com excel, SPSS e stata*. Rio de Janeiro: Elsevier.
- Femenia-Serra, F., Gretzel, U., & Alzua-Sorzabal, A. (2022). Instagram travel influencers in #quarantine: Communicative practices and roles during COVID-19. *Tourism Management*, 89. <https://doi.org/10.1016/j.tourman.2021.104454>
- Ferreira, F., Liberato, D., Sousa, M., Liberato, P., Costa, E. (2024). Crisis Management in Business Tourism. An Empirical Study in the Iberian Peninsula. In: Katsoni, V., Cassar, G. (eds). *Recent Advancements in Tourism Business, Technology, and Social Sciences*. IACuDiT 2023. Springer Proceedings in Business and Economics. Springer, Cham. https://doi.org/10.1007/978-3-031-54342-5_2
- Filieri, R., Yen, D. A., & Yu, Q. (2021). #ILoveLondon: An exploration of the declaration of love towards a destination on Instagram. *Tourism Management*, 85.
<https://doi.org/10.1016/j.tourman.2021.104291>
- Flick, U. (2015). *Introducing research methodology: A beginner's guide to doing a research project* (2nd ed.). Thousand Oaks: Sage.
- Fowler, B. (2017). Stealing thunder and filling the silence: Twitter as a primary channel of police crisis communication. *Public Relations Review*, 43(4), 718-28.
- Freberg, K., Palenchar, M. J., & Veil, S. R. (2013). Managing and sharing H1N1 crisis information using social media bookmarking services. *Public Relations Review*, 39(3), 178–184. <https://doi.org/10.1016/j.pubrev.2013.02.007>
- Fukui, M., & Ohe, Y. (2020). Assessing the role of social media in tourism recovery in tsunami-hit coastal areas in Tohoku, Japan. *Tourism Economics*, 26(5, SI), 776–791. <https://doi.org/10.1177/1354816618825014>
- Gallarza, M. G., Saura, I. G., & García, H. C. (2002). Destination image: towards a conceptual framework. *Annals of Tourism Research*, 29(1), 56-78.
- Galliano, A. (1979). *The scientific method: theory and practice*. São Paulo: Mosaico.
- Galvão, M. C., & Ricarte, I. L. (2019). Revisão Sistemática Da Literatura: Conceituação, Produção E Publicação. *Logeion: Filosofia Da Informação*, 6(1), 57–73.

- <https://doi.org/10.21728/logeion.2019v6n1.p57-73>
- García, A., Gaines, S., & Linaza, M. T. (2012). A Lexicon based sentiment analysis retrieval system for tourism domain. *e-Review of Tourism Research (eRTR)*, 10(2), 35–38.
- Gartner, W. C. (1994). Image formation process. *Journal of Travel and Tourism Marketing*, 2(2–3), 191–216. https://doi.org/10.1300/J073v02n02_12
- Gil, A. C. (2002). *How to design research projects*. São Paulo: Atlas.
- Gkritzali, A., Gritzalis, D., & Stavrou, V. (2018). Is Xenios Zeus Still Alive? Destination Image of Athens in the Years of Recession. *Journal of Travel Research*, 57(4), 540–554. <https://doi.org/10.1177/0047287517705225>
- Gkritzali, A., Mavragani, E., & Gritzalis, D. (2020). Negative MWOM and value co-destruction during destination crises. *Business Process Management Journal*, 26(4), 839–856. <https://doi.org/10.1108/BPMJ-07-2019-0278>
- Glyptou, K. (2020). Destination Image Co-creation in Times of Sustained Crisis. *Tourism Planning & Development*, 18(6), 1-23. <https://doi.org/10.1080/21568316.2020.1789726>
- Gon, M. (2021). Local experiences on Instagram: Social media data as source of evidence for experience design. *Journal of Destination Marketing and Management*, 19, 100435. <https://doi.org/10.1016/j.jdmm.2020.100435>
- Gomezeli D.O. (2016). A systematic review of research on innovation in hospitality and tourism. *International Journal of Contemporary Hospitality Management*, 28(3), 516- 558. <https://doi.org/10.1108/IJCHM-10-2014-0510>
- González, I., Camarero, C., & San José Cabezudo, R. (2021). SOS to my followers! The role of marketing communications in reinforcing online travel community value during times of crisis. *Tourism Management Perspectives*, 39. <https://doi.org/10.1016/j.tmp.2021.100843>
- Goodrich, J. N. (1978). The Relationship Between Preferences for and Perceptions of Vacation Destinations: Application of a Choice Model. *Journal of Travel Research*, 17(2), 8-13. <https://doi.org/10.1177/004728757801700202>
- Gössling, S., Scott, D., & Hall, C. M. (2020). Pandemics, tourism and global change: a rapid assessment of COVID-19. *Journal of Sustainable Tourism*, 29(1), 1–20. <https://doi.org/10.1080/09669582.2020.1758708>
- Gretzel, U. & Yoo, K.-H. (2017). Social Media in Hospitality and Tourism. In S. Dixit (Ed.), *Routledge Handbook of Consumer Behaviour in Hospitality and Tourism*, (pp. 339-346). New York: Routledge.
- Gretzel, U., Fuchs, M., Baggio, R., Hoepken, W., Law, R., Neidhardt, J., Pesonen, J., Zanker, M., & Xiang, Z. (2020). e-Tourism beyond COVID-19: a call for transformative research. *Information Technology & Tourism*, 22, 187–203. <https://doi.org/10.1007/s40558-020-00181-3>
- Guedes, D., & Gosling, M. (2023). Activity of Brazilian Tourism Agencies in Social Media: an Analysis Using Natural Language Processing. *Perspectivas em Ciencia da Informacao*, 28. <https://doi.org/10.1590/1981-5344/25280>
- Gutauskas, A. F., & Valdez, R. (2019). Comunicación responsable de una marca turística en crisis: El caso de Villa la Angostura en la erupción del volcán Puyehue. *Revista de Estudios Latinoamericanos Sobre Reducción Del Riesgo de Desastres REDER*, 3(1), 53. <https://doi.org/10.55467/reder.v3i1.23>
- Hall, T. (2009). Tourism, Urban. In Kitchin, R. and Thrift, N. (Eds.), *The International Encyclopedia of Human Geography* (pp. 318-323). Elsevier.

<https://doi.org/10.1016/B978-008044910-4.01105-6>

- Hardt, D., & Kano Glückstad, F. (2024). A Social Media Analysis of Travel Preferences and Attitudes, Before and During Covid-19. *Tourism Management*, 100, Article 104821. <https://doi.org/10.1016/j.tourman.2023.104821>
- 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. <https://doi.org/10.1080/13683500.2012.662215>
- Huang, S. S., & Wang, X. (2023). COVID-19 two years on: A review of COVID-19-related empirical research in major tourism and hospitality journals. *International Journal of Contemporary Hospitality Management*, 35(2), 743–764. <https://doi.org/10.1108/IJCHM-03-2022-0393>
- Huertas, A., & Marine-Roig, E. (2015). Destination Brand Communication Through the Social Media: What Contents Trigger Most Reactions of Users? *Information and Communication Technologies in Tourism*, 2015, 295–308. https://doi.org/10.1007/978-3-319-14343-9_22
- Huertas, A., & Marine-Roig, E. (2016). Differential Destination Content Communication Strategies Through Multiple Social Media. In: A. Inversini, & R. Schegg (eds), *Information and Communication Technologies in Tourism 2016*. Springer. https://doi.org/10.1007/978-3-319-28231-2_18
- Huertas, A., & Oliveira, A. (2019). How tourism deals with terrorism from a public relations perspective: A content analysis of communication by destination management organizations in the aftermath of the 2017 terrorist attacks in Catalonia. *Catalan Journal of Communication and Cultural Studies*, 11(1), 39–58. https://doi.org/10.1386/cjcs.11.1.39_1
- Huertas, A., Oliveira, A., & Giroto, M. (2020). Crisis communication management by the national tourist organizations of Spain and Italy in the face of COVID-19. *Profesional de La Informacion*, 29(4), 1–18. <https://doi.org/10.3145/epi.2020.jul.10>
- Hugo, N., & Miller, H. (2017). Conflict resolution and recovery in Jamaica: the impact of the Zika virus on destination image. *Worldwide Hospitality and Tourism Themes*, 9(5), 516–524. <https://doi.org/10.1108/whatt-07-2017-0030>
- Hunt, J. D. (1975). Image as a factor in tourism development. *Journal of Travel Research*, 13(3), 1–7. <https://doi.org/10.1177/004728757501300301>
- Hunter, W. C. (2008). A typology of photographic representations for tourism: Depictions of groomed spaces. *Tourism Management*, 29(2), 354–365.
- Hvass, K. A. (2013). Tourism social media and crisis communication: An erupting trend. In A. M. Munar, S. Gyimóthy, & L. Cai (Eds.), *Tourism Social Science Series Tourism Social Media: Transformations in Identity, Community and Culture* (pp. 177–191). Emerald. [https://doi.org/10.1108/S1571-5043\(2013\)0000018012](https://doi.org/10.1108/S1571-5043(2013)0000018012)
- Iglesias-Sánchez, P. P., Correia, M. B., Jambrino-Maldonado, C., & de las Heras-Pedrosa, C. (2020). Instagram as a co-creation space for tourist destination image-building: Algarve and costa del sol case studies. *Sustainability (Switzerland)*, 12(7), 1–26. <https://doi.org/10.3390/su12072793>
- INE. Instituto Nacional de Estatística. (2020a). *Estatísticas do Turismo – 2019*. https://www.ine.pt/xportal/xmain?xpid=INE&xpgid=ine_publicacoes&PUBLICACOESpub_boui=133574&PUBLICACOESmodo=2
- INE. Instituto Nacional de Estatística. (2020b). *Boletim mensal de estatística – dezembro, 2020*. https://www.ine.pt/xportal/xmain?xpid=INE&xpgid=ine_publicacoes&PUBLICACOESpub_boui=133574&PUBLICACOESmodo=2

- INE. Instituto Nacional de Estatística. (2022). *Estatísticas do Turismo – 2022*.
https://www.ine.pt/xportal/xmain?xpgid=ine_tema&xpid=INE&tema_cod=1713&xlang=pt
- Ingrassia, M., Bellia, C., Giurdanella, C., Columba, P., & Chironi, S. (2022). Digital Influencers, Food and Tourism: A New Model of Open Innovation for Businesses in the Ho.Re.Ca. Sector. *Journal of Open Innovation: Technology, Market, and Complexity*, 8(1). <https://doi.org/10.3390/joitmc8010050>
- Jick, T. D. (1979). Mixing Qualitative and Quantitative Methods: Triangulation in Action. *Administrative Science Quarterly*, 24(4), 602–611.
<https://doi.org/10.2307/2392366>
- 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.
<https://doi.org/10.1080/10627261003801420>
- Johns Hopkins University Medicine. (2020). COVID-19 Dashboard by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins.
<https://coronavirus.jhu.edu/map.html> 2020
- Johns Hopkins University Medicine. (2021). COVID-19 Dashboard by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins.
<https://coronavirus.jhu.edu/map.html>
- Joseph, A. I., & Anandkumar, V. (2021). Destination Brand Communication during COVID-19 Pandemic - The Case of Iceland. *International Journal of Hospitality and Tourism Systems*, 14, 44–58.
- Kani, Y., Aziz, Y. A., Sambasivan, M., & Bojei, J. (2017). Antecedents and outcomes of destination image of Malaysia. *Journal of Hospitality and Tourism Management*, 32, 89–98. <https://doi.org/10.1016/j.jhtm.2017.05.001>
- Kaplan, A. M., & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of Social Media. *Business Horizons*, 53(1), 59–68.
<https://doi.org/10.1016/j.bushor.2009.09.003>
- Kastenholz, E. (2002). The role and marketing implications of destination images on tourist behavior: The case of northern Portugal. (Tese de Doutoramento em Turismo, Universidade de Aveiro). ProQuest.
<http://search.proquest.com/docview/305439508?accountid=14495%5Cnhttp://diana.uca.es:4550/resserv?genre=dissertations+&+theses&issn=&title=The+role+and+marketing+implications+of+destination+images+on+tourist+behavior:+The+case+of+northern+Portugal&volume=&is>
- Ketter, E. (2016). Destination image restoration on Facebook: The case study of Nepal's Gurkha Earthquake. *Journal of Hospitality and Tourism Management*, 28, 66–72. <https://doi.org/10.1016/j.jhtm.2016.02.003>
- Ketter, E., & Avraham, E. (2021). #StayHome today so we can #TravelTomorrow: tourism destinations' digital marketing strategies during the Covid-19 pandemic. *Journal of Travel & Tourism Marketing*, 38(8), 819–832.
<https://doi.org/10.1080/10548408.2021.1921670>
- Kim, D., & Perdue, R. R. (2011). The influence of image on destination attractiveness. *Journal of Travel and Tourism Marketing*, 28(3), 225–239.
<https://doi.org/10.1080/10548408.2011.562850>
- Kim, M., & Kim, J. (2019). Destination authenticity as a trigger of tourists online engagement on social media. *Journal of Travel Research*, 59(7), 1238–1252.

<https://doi.org/10.1177/0047287519878510>

- Kim, W., & Kim, H. (2013). Regional Development Strategy for Increasing Cultural Tourism Business in South Korea. *Asia Pacific Journal of Tourism Research*, 18(6), 534–548. <https://doi.org/10.1080/10941665.2012.695285>
- Kirilenko, A. P., Stepchenkova, S. O., Kim, H., & Li, X. (Robert). (2017). Automated Sentiment Analysis in Tourism: Comparison of Approaches. *Journal of Travel Research*, 57(8), 1012–1025. <https://doi.org/10.1177/0047287517729757> (Original work published 2018)
- Köche, J. C. (2011). *Fundamentos de metodologia científica: teoria da ciência e iniciação à pesquisa*. Petrópolis, RJ: Vozes.
- Kotler, P., Haider, D., & Rein, I. (1993). *Marketing Places. Attracting Investment, Industry, and Tourism to Cities, States, and Nations*. New York: Maxwell Macmillan Int.
- Kotler, P., Kartajaya, H. & Setiawan, I. (2017). *Marketing 4.0: Mudança do Tradicional para o Digital* (P. E. Duarte, Trad.). Coimbra, Portugal: Conjuntura Actual Editora. <https://doi.org/10.4000/cp.4302>
- Krippendorff, K. (2018). *Content analysis: An introduction to its methodology* (4nd ed.). Los Angeles, CA: Sage Publications.
- Kruskal, W. H., & Wallis, W. A. (1952). Use of Ranks in One-Criterion Variance Analysis. *Journal of the American Statistical Association*, 47(260), 583–621. <https://doi.org/10.1080/01621459.1952.10483441>
- Kwok, L., Lee, J., & Han, S. H. (2022). Crisis Communication on Social Media: What Types of COVID-19 Messages Get the Attention? *Cornell Hospitality Quarterly*, 63(4), 528–543. <https://doi.org/10.1177/19389655211028143>
- La Ville, C. & Dionne, J. (1999). *The construction of knowledge: Handbook of Research Methodology in the Human Sciences*. Porto Alegre: Artes Médocas
- Lai, K., Li, X., & Robert, J. (2016). Tourism destination image: Conceptual problems and definitional solutions. *Journal of Travel Research*, 55(8), 1065–1080. <https://doi.org/10.1177/0047287515619693>
- Lakatos, E. & Marconi, M. (2011) *Metodologia do trabalho científico*. São Paulo: Atlas.
- Lee, M., Hong, J. H., Chung, S., & Back, K.-J. (2021). Exploring the Roles of DMO's Social Media Efforts and Information Richness on Customer Engagement: Empirical Analysis on Facebook Event Pages. *Journal of Travel Research*, 60(3), 670–686. <https://doi.org/10.1177/0047287520934874>
- Lenggogeni, S., Ashton, A. S., & Scott, N. (2022). Humour: coping with travel bans during the COVID-19 pandemic. *International Journal of Culture, Tourism, and Hospitality Research*, 16(1), 222–237. <https://doi.org/10.1108/IJCTHR-09-2020-0223>
- Leung, D., Law, R., van Hoof, H., & Buhalis, D. (2013). Social Media in Tourism and Hospitality: A Literature Review. *Journal of Travel and Tourism Marketing*, 30(1–2), 3–22. <https://doi.org/10.1080/10548408.2013.750919>
- Li, B., & Scott, O. (2020). Fake news travels fast: Exploring misinformation circulated around Wu Lei's coronavirus case. *International Journal of Sport Communication*, 13(3), 505–513. <https://doi.org/10.1123/ijsc.2020-0056>
- Li, S., Wang, Y., Filieri, R., & Zhu, Y. (2022). Eliciting positive emotion through strategic responses to COVID-19 crisis: Evidence from the tourism sector. *Tourism Management*, 90. <https://doi.org/10.1016/j.tourman.2021.104485>

- Li, X., & Stepchenkova, S. (2012). Chinese outbound tourists' destination image of America: Part I. *Journal of Travel Research*, 51(3), 250–266. <https://doi.org/10.1177/0047287511410349>
- Li, Y., Yang, S., Zhang, S., & Zhang, W. (2019). Mobile social media use intention in emergencies among Gen Y in China: an integrative framework of gratifications, task-technology fit, and media dependency, *Telematics and Informatics*, 42, 101244. <https://doi.org/10.1016/j.tele.2019.101244>Get rights and content
- Liu, B. F. (2010). Effective public relations in racially-charged crises: Not black or white. In W. T. Coombs, & S. J. Holladay (Eds.), *Handbook of crisis communication* (pp. 335–358). New York: Wiley-Blackwell
- Liu, B. F., Austin, L. L., & Jin, Y. (2011). How publics respond to crisis communication strategies: The interplay of information form and source. *Public Relations Review*, 37, 345–353. <https://doi.org/10.1016/j.pubrev.2011.08.004>
- Liu, B., Pennington-Gray, L., & Klemmer, L. (2015a). Using social media in hotel crisis management: the case of bed bugs. *Journal of Hospitality and Tourism Technology*, 6(2), 102–112. <https://doi.org/10.1108/JHTT-08-2014-0036>
- Liu, B., Pennington-Gray, L., Donohoe, H., & Omodior, O. (2015b). New York City bed bug crisis as framed by tourists on tripadvisor. *Tourism Analysis*, 20(2), 243–250. <https://doi.org/10.3727/108354215X14265319207597>
- Liu, J., Wang, C., & Zhang, T. (2024). Exploring social media affordances in tourist destination image formation: A study on China's rural tourism destination, *Tourism Management*, 101. <https://doi.org/10.1016/j.tourman.2023.104843>
- Liu-Lastres, B. (2022). Beyond simple messaging: A review of crisis communication research in hospitality and tourism. *International Journal of Contemporary Hospitality Management*, 34(5), 1959–1983.
- Liu-Lastres, B., Kim, H., & Ying, T. (2020). Learning from past crises: Evaluating hotels' online crisis responses to health crises. *Tourism and Hospitality Research*, 20(3), 372–378. <https://doi.org/10.1177/1467358419857779>
- Lohiniva, A., Sane, J., Sibenberg, K., Puumalainen, T., & Salminen, M. (2020). Understanding coronavirus disease (COVID-19) risk perceptions among the public to enhance risk communication efforts: a practical approach for outbreaks, Finland. *Euro Surveill*, 25 (13). <https://doi.org/10.2807/1560-7917.ES.2020.25.13.2000317>
- Lu, Y., & Huang, Y. (2024). Emotions in Risk and Crisis Communication: An Individual and Networked Perspective. In Timothy L. Sellnow and Deanna D. Sellnow (Eds.), *Communicating Risk and Safety* (pp. 123-142). Berlin, Boston: De Gruyter Mouton. <https://doi.org/10.1515/9783110752427-008>
- Luo, Q., & Zhai, X. (2017). “I will never go to Hong Kong again!” How the secondary crisis communication of “Occupy Central” on Weibo shifted to a tourism boycott. *Tourism Management*, 62, 159–172. <https://doi.org/10.1016/j.tourman.2017.04.007>
- Mackay, K. J., & Couldwell, C. M. (2004). Using visitor-employed photography to investigate destination image. *Journal of Travel Research*, 42(4), 390–396.
- Mair, J., Ritchie, B., & Walters, G. (2016). Towards a research agenda for post-disaster and post-crisis recovery strategies for tourist destinations: a narrative review, *Current Issues in Tourism*, 19 (1), 1- 26. <https://doi.org/10.1080/13683500.2014.932758>
- Mak, A. H. N. (2017). Online destination image: Comparing national tourism organisation's and tourists' perspectives. *Tourism Management*, 60, 280–297.

<https://doi.org/10.1016/j.tourman.2016.12.012>

- Mariani, M. M., Di Felice, M., & Mura, M. (2016). Facebook as a destination marketing tool: Evidence from Italian regional Destination Management Organizations. *Tourism Management*, 54, 321–343. <https://doi.org/10.1016/j.tourman.2015.12.008>
- Markwick, M. (2001). Postcards from Malta: image, consumption, context. *Annals of Tourism Research*, 28(2), 417e438. [https://doi.org/10.1016/S0160-7383\(00\)00049-9](https://doi.org/10.1016/S0160-7383(00)00049-9)
- Mason, A., Flores, L., Liu, P., Tims, K., Spencer, E., & Gire, T. G. (2019). Disaster communication: An analysis of the digital communication strategies used by the medical tourism industry during the 2017 Caribbean hurricane season. *Journal of Hospitality and Tourism Insights*, 2(3), 241–259. <https://doi.org/10.1108/JHTI-03-2018-0021>
- Mele, E., Filieri, R., De Carlo, M. (2023). Pictures of a crisis. Destination marketing organizations' Instagram communication before and during a global health crisis. *Journal of Business Research*, 163, 113931. <https://doi.org/10.1016/j.jbusres.2023.113931>. Epub 2023 Apr 13. PMID: 37070099; PMCID: PMC10098544.
- Merriam, S. B. (2009). *Qualitative research: A guide to design and implementation*. San Francisco, CA: Jossey-Bass.
- Míguez-González, M.I., Lozano, N., & Huertas, A. (2016). YouTube: La compartición de vídeos. In A. Huertas (ed), *La comunicación de los destinos turísticos y sus marcas a través de los medios sociales* (pp 30–38). Tarragona, Catalunya: Universitat Rovira i Virgili.
- Mikulić, J., Miloš Sprčić, D., Holiček, H., & Prebežac, D. (2018). Strategic crisis management in tourism: An application of integrated risk management principles to the Croatian tourism industry. *Journal of Destination Marketing & Management*, 7, 36–38. doi:10.1016/j.jdmm.2016.08.001
- Minazzi, R. (2015). *Social Media Marketing in Tourism : challenges and perspectives*. London: Springer International Publishing. <https://doi.org/10.1007/978-3-319-05182-6>
- Moher, D., Liberati, A., Tetzlaff, J., Altman, D. G., Altman, D., Antes, G., Atkins, D., Barbour, V., Barrowman, N., Berlin, J. A., Clark, J., Clarke, M., Cook, D., D'Amico, R., Deeks, J. J., Devereaux, P. J., Dickersin, K., Egger, M., Ernst, E., ... Tugwell, P. (2009). Preferred reporting items for systematic reviews and meta-analyses: The PRISMA statement. *PLoS Medicine*, 6(7). <https://doi.org/10.1371/journal.pmed.1000097>
- Moller, C., Wang, J., & Nguyen, H. T. (2018). #Strongerthanwinston: Tourism and crisis communication through Facebook following tropical cyclones in Fiji. *Tourism Management*, 69, 272–284. <https://doi.org/10.1016/j.tourman.2018.05.014>
- Mongeon, P., & Paul-Hus, A. (2016). The Journal Coverage of Web of Science and Scopus: A Comparative Analysis. *Scientometrics*, 106, 213–228. <https://doi.org/10.1007/s11192-015-1765-5>
- Morgan, A., Wilk, V., Sibson, R., & Willson, G. (2021). Sport event and destination co-branding: Analysis of social media sentiment in an international, professional sport event crisis. *Tourism Management Perspectives*, 39. <https://doi.org/10.1016/j.tmp.2021.100848>
- Mostafa, M. M. (2013). More than words: Social networks' text mining for consumer

- brand sentiments. *Expert Systems with Applications*, 40, 4241-4251.
<https://doi.org/10.1016/j.eswa.2013.01.019>
- Munteanu, A.-R., Rizea, R.-D., Ilie, A. G., & Sarbu, R. (2014). Investigating potential strategies for increasing tourism competitiveness at the Black Sea shore. *Amfiteatru Economic*, 16(SpecialIss), 1253–1268.
- Muritala, B. A., Hernández-Lara, A.-B., Sánchez-Rebull, M.-V., & Perera-Lluna, A. (2022). #CoronavirusCruise: Impact and implications of the COVID-19 outbreaks on the perception of cruise tourism. *Tourism Management Perspectives*, 41.
<https://doi.org/10.1016/j.tmp.2022.100948>
- Nadeau, J., Wardley, L. J., & Rajabi, E. (2022). Tourism destination image resiliency during a pandemic as portrayed through emotions on Twitter. *Tourism and Hospitality Research*, 22(1), 60–70. <https://doi.org/10.1177/14673584211038317>
- Nilashi, M., Abumalloh, R. A., Minaei-Bidgoli, B., Abdu Zogaan, W., Alhargan, A., Mohd, S., Syed Azhar, S. N. F., Asadi, S., & Samad, S. (2022). Revealing travellers' satisfaction during COVID-19 outbreak: Moderating role of service quality. *Journal of Retailing and Consumer Services*, 64.
<https://doi.org/10.1016/j.jretconser.2021.102783>
- Novelli, M., Burgess, L. G., Jones, A., & Ritchie, B. W. (2018). 'No Ebola...still doomed' - The Ebola-induced tourism crisis. *Annals of Tourism Research*, 70, 76–87.
<https://doi.org/10.1016/j.annals.2018.03.006>
- Obembe, D., Kolade, O., Obembe, F., Owoseni, A., & Mafimisebi, O. (2021). Covid-19 and the tourism industry: An early stage sentiment analysis of the impact of social media and stakeholder communication. *International Journal of Information Management Data Insights*, 1(2). <https://doi.org/10.1016/j.ijime.2021.100040>
- Oliveira, A., & Huertas-Roig, A. (2019). How do destinations use twitter to recover their images after a terrorist attack? *Journal of Destination Marketing and Management*, 12(February), 46–54. <https://doi.org/10.1016/j.jdmm.2019.03.002>
- Omerzel, D. G. (2016). A systematic review of research on innovation in hospitality and tourism. *International Journal of Contemporary Hospitality Management*, 28(3), 516–558. <https://doi.org/10.1108/IJCHM-10-2014-0510>
- Pachucki, C., Grohs, R., & Scholl-Grissemann, U. (2022). Is nothing like before? COVID-19 – evoked changes to tourism destination social media communication. *Journal of Destination Marketing and Management*, 23.
<https://doi.org/10.1016/j.jdmm.2022.100692>
- Paltoglou, G., & Thelwall, M. (2012). Twitter, MySpace, Digg: Unsupervised Sentiment Analysis in Social Media. *ACM Transactions on Intelligent Systems and Technology (TIST)*, 3(4), 1-19. <https://doi.org/10.1145/2337542.2337551>
- Pan, S., Lee, J., & Tsai, H. (2014). Travel photos: Motivations, image dimensions, and affective qualities of places. *Tourism Management*, 40, 59–69.
<https://doi.org/10.1016/j.tourman.2013.05.007>
- Park, D., Kim, W. G. W. G., & Choi, S. (2019). Application of social media analytics in tourism crisis communication. *Current Issues in Tourism*, 22(15), 1810–1824.
<https://doi.org/10.1080/13683500.2018.1504900>
- Pasquinelli, C., & Trunfio, M. (2022). The missing link between overtourism and post-pandemic tourism. Framing Twitter debate on the Italian tourism crisis. *Journal of Place Management and Development*, 15(3), 229–247.
<https://doi.org/10.1108/JPMD-07-2020-0073>
- Pasquinelli, C., Trunfio, M., Bellini, N., & Rossi, S. (2022). Reimagining urban destinations: Adaptive and transformative city brand attributes and values in the

- pandemic crisis. *Cities*, 124. <https://doi.org/10.1016/j.cities.2022.103621>
- Penco, L., Profumo, G., Remondino, M., & Bruzzi, C. (2019). Critical events in the tourism industry: factors affecting the future intention to take a cruise. *International Journal of Contemporary Hospitality Management*, 31(9), 3547–3566. <https://doi.org/10.1108/IJCHM-05-2018-0423>
- Pennington-Gray, L., & Schroeder, A. (2013). The social media capital of the universe: What does this mean for Brazilian tourists to the US? *Tourism, Culture and Communication*, 13(1), 43–59. <https://doi.org/10.3727/109830413X13769180530684>
- Perakakis, E., Trihas, N., Venitourakis, M., Mastorakis, G., & Kopanakis, I. (2016). Social media as a marketing tool for Greek destinations. *Tourismos*, 11(3), 157–181.
- Popper, K. (2003). *A lógica da investigação científica*. São Paulo: Cultrix and EDUSP.
- Popper, K. (2008). *Busca inacabada: Autobiografia intelectual*. Esfera do Caos.
- Priporas, C. V., Stylos, N., & Kamenidou, I. (2020). City image, city brand personality and generation Z residents' life satisfaction under economic crisis: Predictors of city-related social media engagement. *Journal of Business Research*, 119, 453–463. <https://doi.org/10.1016/j.jbusres.2019.05.019>
- Qiu, R.T.R., Liu, A., Stienmetz, J.L., & Yu, Y. (2021). Timing matters: crisis severity and occupancy rate forecasts in social unrest periods. *International Journal of Contemporary Hospitality Management*, Vol. 33 No. 6, pp. 2044–2064. <https://doi.org/10.1108/IJCHM-06-2020-0629>
- Ragini, J. R., Anand, P. M. R., & Bhaskar, V. (2018). Big data analytics for disaster response and recovery through sentiment analysis. *International Journal of Information Management*, 42, 13–24. <https://doi.org/10.1016/j.ijinfomgt.2018.05.004>
- Ramos, P., Salazar, A., & Gomes, J. (2000). Trends in Portuguese tourism: a content analysis of association and trade representative perspectives. *International Journal of Contemporary Hospitality Management*, 12 (7), 409–416. <https://doi.org/10.1108/09596110010347266>
- Rather, R. A. (2021). Demystifying the effects of perceived risk and fear on customer engagement, co-creation and revisit intention during COVID-19: A protection motivation theory approach. *Journal of Destination Marketing and Management*, 20, 100564. <https://doi.org/10.1016/j.jdmm.2021.100564>
- Ritchie, B. W. (2004). Chaos, crises and disasters: a strategic approach to crisis management in the tourism industry. *Tourism Management*, 25(6), 669–683. <https://doi.org/10.1016/j.tourman.2003.09.004>
- Roshan, M., Warren, M., & Carr, R. (2016). Understanding the use of social media by organisations for crisis communication. *Computers in Human Behavior*, 63, 350–361. <https://doi.org/10.1016/j.chb.2016.05.016>
- Roth-Cohen, O., & Lahav, T. (2022). Cruising to nowhere: Covid-19 crisis discourse in cruise tourism Facebook groups. *Current Issues in Tourism*, 25(9), 1509–1525. <https://doi.org/10.1080/13683500.2021.1940106>
- Sadia, A., Khan, F., & Bashir, F. (2018). *An Overview of Lexicon-Based Approach For Sentiment Analysis*. 3rd International Electrical Engineering Conference (IEEC 2018), IEP Centre, Karachi, Pakistan. https://ieec.neduet.edu.pk/2018/Papers_2018/15.pdf
- Saragih, M. H., & Girsang, A. S. (2017). Sentiment analysis of customer engagement on

- social media in transport online. In *Proceedings - 2017 International Conference on Sustainable Information Engineering and Technology* (24–29). Institute of Electrical and Electronics Engineers (IEEE).
<https://doi.org/10.1109/SIET.2017.8304103>
- Schroeder, A., & Pennington-Gray, L. (2015). The Role of Social Media in International Tourist's Decision Making. *Journal of Travel Research*, 54(5), 584–595.
<https://doi.org/10.1177/0047287514528284>
- Schroeder, A., & Pennington-Gray, L. (2014). Perceptions of crime at the Olympic Games: What role does media, travel advisories, and social media play? *Journal of Vacation Marketing*, 20(3), 225–237. <https://doi.org/10.1177/1356766714521809>
- Schroeder, A., Pennington-gray, L., Donohoe, H., Kiouisis, S., Schroeder, A., & Pennington-gray, L. (2013). Using Social Media in Times of Crisis. *Journal of Travel & Tourism Marketing*, 30(1-2), 126-143.
<https://doi.org/10.1080/10548408.2013.751271>
- Schroeder, A., Pennington-Gray, L., Kim, H., & Liu-Lastres, B. (2018). Using the media's tweets to broaden previous conceptualizations of political travel risks. *Tourism Management Perspectives*, 26, 107–117.
<https://doi.org/10.1016/j.tmp.2018.03.001>
- 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, 20–27. <https://doi.org/10.1016/j.pubrev.2010.12.001>
- Schweinsberg, S., Darcy, S., & Beirman, D. (2020). 'Climate crisis' and 'bushfire disaster': Implications for tourism from the involvement of social media in the 2019–2020 Australian bushfires. *Journal of Hospitality and Tourism Management*, 43, 294–297. <https://doi.org/10.1016/j.jhtm.2020.03.006>
- Scott, N., Laws, E., & Prideaux, B. (2008). Tourism Crises and Marketing Recovery Strategies. *Journal of Travel & Tourism Marketing*, 23 (2), 1 – 13.
http://dx.doi.org/10.1300/J073v23n02_01
- Sharda, R., Delen, D., & Turban, E., (2014). *Business intelligence: A managerial perspective on analytics*. (3rd ed.). Harlow. Pearson.
- Sharp, B., Finkel, R. & Dashper, K. (eds). (2022). *Transforming leisure in the pandemic: re-imagining interaction and activity during crisis*. New York, NY: Routledge.
- Shin, S., Kim, T., Hlee, S., & Koo, C. (2023). Destination Advertising on YouTube: Effects of Native Advertising and Comment Management on Tourist Perception. *Journal of Hospitality and Tourism Research*.
<https://doi.org/10.1177/10963480231194689>
- Sigala, M. (2011). Social media and crisis management in tourism: Applications and implications for research. *Information Technology & Tourism*, 13(4), 269–283.
<https://doi.org/10.3727/109830512X13364362859812>
- Sigala, M. (2020). Tourism and COVID-19: Impacts and implications for advancing and resetting industry and research. *Journal of Business Research*, 117, 312–321.
<https://doi.org/10.1016/j.jbusres.2020.06.015>
- Solazzo, G., Maruccia, Y., Ndou, V., & Del Vecchio, P. (2022). How to exploit Big Social Data in the Covid-19 pandemic: the case of the Italian tourism industry. *Service Business*, 16(3), 417–443. <https://doi.org/10.1007/s11628-022-00487-8>
- Song, Y., Liu, K., Guo, L., Yang, Z., & Jin, M. (2022). Does hotel customer satisfaction change during the COVID-19? A perspective from online reviews. *Journal of Hospitality and Tourism Management*, 51, 132–138.

- <https://doi.org/10.1016/j.jhtm.2022.02.027>
- Sönmez, S., & Sirakaya, E. (2002). A distorted destination image? The case of Turkey. *Journal of Travel Research*, 41(2), 185–196. <https://doi.org/10.1177/004728702237418>
- Sönmez, S., Backman, K., & Allen, L. (1994). *Managing tourism crises: A guidebook*. Clemson, SC: Clemson University.
- Spence, P. R., Lachlan, K. A., & Rainear, A. M. (2015). Social media and crisis research: Data collection and directions. *Computers in Human Behavior*, 54, 667–672. <https://doi.org/10.1016/j.chb.2015.08.045>
- Statista. (2022). *Social media - Statistics & Facts*. <https://www.statista.com/topics/1164/social-networks/#topicOverview>
- Stepchenkova, S., & Zhan, F. (2013). Visual destination images of Peru: Comparative content analysis of DMO and user-generated photography. *Tourism Management*, 36, 590–601. <https://doi.org/10.1016/j.tourman.2012.08.006>
- Stepchenkova, S., Kim, H., & Kirilenko, A. (2015). Cultural Differences in Pictorial Destination Images: Russia through the Camera Lenses of American and Korean Tourists. *Journal of Travel Research*, 54(6), 758–773. <https://doi.org/10.1177/0047287514535849>
- Stephenson, C., Handmer, J., & Betts, R. (2013). Estimating the economic, social and environmental impacts of wildfires in Australia. *Environmental Hazards*, 12(2), 93-111. <https://doi.org/10.1080/17477891.2012.703490>
- Su, L., Stepchenkova, S., & Kirilenko, A. P. (2019). Online public response to a service failure incident: Implications for crisis communications. *Tourism Management*, 73, 1–12. <https://doi.org/10.1016/j.tourman.2019.01.011>
- Sun, W., Tang, S., & Liu, F. (2021). Examining perceived and projected destination image: A social media content analysis. *Sustainability (Switzerland)*, 13(6). <https://doi.org/10.3390/su13063354>
- Taecharungroj, V., & Pattaratanakun, A. (2023). Responding to an unprecedented shock – Elucidating how 113 DMOs changed the marketing communications on Twitter during the COVID-19 crisis. *Journal of Destination Marketing & Management*, 30, 100819. <https://doi.org/10.1016/j.jdmm.2023.100819>
- Tasso, J. P., Perinotto, A. & Rezende Filho, M. (2023). Welcome to Brazilian Overtourism: a retomada da saturação e da irresponsabilidade em destinos turísticos brasileiros. *Novos Cadernos NAEA*, 26(1), 243-272. <https://doi.org/10.18542/ncn.v26i1.12160>
- Thiollent, M. (2005). *Metodologia da Pesquisa-ação*. São Paulo: Cortez Editora.
- Tolkach, D. (2018). A view of Occupy Central impacts on Hong Kong tourism from the other side of the Great Firewall: A rejoinder to Luo & Zhai. *Tourism Management*, 67, 307–311. <https://doi.org/10.1016/j.tourman.2018.02.011>
- Tranfield, D., Denyer, D., & Smart, P. (2003). Towards a methodology for developing evidence-informed management knowledge by means of systematic review. *British Journal of Management*, 14(3), 207e222. <https://doi.org/10.1111/1467-8551.00375>
- TravelBI (2023). Eurostat: Dashboard de recuperação pós-covid-19 – edição de abril. <https://travelbi.turismodeportugal.pt/turismo-internacional/eurostat-dashboard-de-recuperacao-pos-covid-19-edicao-de-abril/#:~:text=O%20ritmo%20de%20recupera%C3%A7%C3%A3o%20de,dos%20pa%C3%ADses%20da%20Uni%C3%A3o%20Europeia.>

- Triantafyllidou, A., & Yannas, P. (2020). Social media crisis communication in racially charged crises: Exploring the effects of social media and image restoration strategies. *Computers in Human Behavior*, 106, 106269. <https://doi.org/10.1016/j.chb.2020.106269>
- Tribe, J., & Liburd, J. J. (2016). The tourism knowledge system. *Annals of Tourism Research*, 57, 44–61. <https://doi.org/10.1016/j.annals.2015.11.011>
- Tuclea, C.-E., Vrânceanu, D.-M., & Năstase, C.-E. (2020). The role of social media in health safety evaluation of a tourism destination throughout the travel planning process. *Sustainability (Switzerland)*, 12(16). <https://doi.org/10.3390/su12166661>
- Turismo de Portugal. (2019). *World Travel Awards 2019*. <http://www.turismodeportugal.pt/pt/Noticias/Paginas/world-travel-awards-2019.aspx>
- Turismo de Portugal. (2020). *Clean & Safe: Está seguro conosco. Respire fundo e desfrute*. <https://portugalcleanandsafe.com/pt-pt/visiting>
- Ulmer, R. R., Seeger, M. W., & Sellnow, T. L. (2007). Post-crisis communication and renewal: Expanding the parameters of post-crisis discourse. *Public Relations Review*, 33(2), 130–134. <https://doi.org/10.1016/j.pubrev.2006.11.015>
- UNWTO. United Nations World Tourism Organization (2011). *Panorama del turismo internacional 2011*. <https://www.e-unwto.org/doi/book/10.18111/9789284414017>
- UNWTO - World Tourism Organization (2019a). *Tourism Definitions*. Madrid: UNWTO. <https://doi.org/10.18111/9789284420858>.
- UNWTO. United Nations World Tourism Organization (2019b). *International Tourism Highlights 2019 Edition*. <https://www.e-unwto.org/doi/pdf/10.18111/9789284421152>
- UNWTO. United Nations World Tourism Organization (2020a). *Global and regional tourism performance*. <https://www.unwto.org/global-and-regional-tourism-performance>
- UNWTO. United Nations World Tourism Organization (2020b). *Impact assessment of the covid-19 outbreak on international tourism*. <https://www.unwto.org/impact-assessment-of-the-covid-19-outbreak-on-international-tourism>
- UNWTO. United Nations World Tourism Organization (2021). *2020: Pior ano da história do turismo, com menos 1 bilhão de chegadas internacionais*. <https://www.unwto.org/taxonomy/term/347>
- UNWTO. United Nations World Tourism Organization (2022). *UNWTO Tourism Recovery Tracker*. <https://www.unwto.org/tourism-data/unwto-tourism-recovery-tracker>
- Upadhyay, S., Chaskar, A., & Sigala, M. (2023). Breaking waves: A bibliometric odyssey on crisis communication in tourism and hospitality (1980–2022) and paving the path for future research. *Journal of Contingencies and Crisis Management*, 31(4), 941–953. <https://doi.org/10.1111/1468-5973.12494>
- Uşaklı, A., Koç, B., & Sönmez, S. (2017). How ‘social’ are destinations? Examining European DMO social media usage. *Journal of Destination Marketing & Management*, 16(2), 136–149.
- 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. <https://doi.org/10.1016/j.pubrev.2012.09.010>
- Valentini, C. (2015). Is using social media “good” for the public relations profession? A

- critical reflection. *Public Relations Review*, 41(2), 170–177.
<https://doi.org/10.1016/j.pubrev.2014.11.009>
- van Doorn, J., Lemon, K. N., Mittal, V., Nass, S., Pick, D., Pirner, P., & Verhoef, P. C. (2010). Customer engagement behavior: Theoretical foundations and research directions. *Journal of Service Research*, 13(3), 253–266.
<https://doi.org/10.1177/1094670510375599>
- Venkatesh, V., Brown, S. A., & Bala, H. (2013). Bridging the qualitative-quantitative divide: Guidelines for conducting mixed methods research in information systems. *MIS Quarterly*, 37(1), 21-54.
- Wang, C. R., Sirakaya-Turk, E., & Aydin, S. (2019). The impact of millennium floods on vacation decisions in a coastal tourism destination: The case of South Carolina, USA. *Tourism Analysis*, 24(2), 193–211.
<https://doi.org/10.3727/108354219X15525055915536>
- Wang, H. Y. (2017). Determinants hindering the intention of tourists to visit disaster-hit destinations. *Current Issues in Tourism*, 20(5), 459–479.
<https://doi.org/10.1080/13683500.2015.1062471>
- Wang, H., Xiong, L., Xia, Y., Tang, Z. R., & Chen, M. (2024). Unraveling the prerequisites of citizen engagement intentions initiated by mobile government social media during emergencies: An integrative dual SEM-ANN analysis. *International Journal of Disaster Risk Reduction*, 110(1239), 104636.
<https://doi.org/10.1016/j.ijdr.2024.104636>
- Wang, Z., Udomwong, P., Fu, J., & Onpium, P. (2023). Destination image: A review from 2012 to 2023. *Cogent Social Sciences*, 9(1).
<https://doi.org/10.1080/23311886.2023.2240569>
- Wang, Z., & Ye, X. (2017). Social media analytics for natural disaster management. *International Journal of Geographical Information Science*, 32(1), 49-72.
<https://doi.org/10.1080/13658816.2017.1367003>
- Whiting, A. & Williams, D. (2013). Why people use social media: a uses and gratifications approach. *Qualitative market research: an international journal*, 16(4), 362-369. <https://doi.org/10.1108/QMR-06-2013-0041>
- WHO. World Health Organization (2020). *WHO Director-General's opening remarks at the media briefing on COVID-19 - 11 March 2020*.
<https://www.who.int/dg/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-COVID-19---11-march-2020>
- Wilcox, R. (2017). *Introdução à Estimação Robusta e Teste de Hipóteses* (4^a ed.). Amsterdã: Elsevier.
- Willson, G., Wilk, V., Sibson, R., & Morgan, A. (2021). Twitter content analysis of the Australian bushfires disaster 2019-2020: futures implications. *Journal of Tourism Futures*, 7(3), 350–355. <https://doi.org/10.1108/JTF-10-2020-0183>
- WTTC. World Travel & Tourism Council. (2019). *The Travel & Tourism Competitiveness Report 2018*. <https://www.wttc.org/economic-impact/benchmark-reports/country-results/>.
- Wut, T. M., Xu, J. (Bill), & Wong, S. mun. (2021). Crisis management research (1985–2020) in the hospitality and tourism industry: A review and research agenda. *Tourism Management*, 85, 104307.
<https://doi.org/10.1016/j.tourman.2021.104307>
- Xiang, Z., & Gretzel, U. (2010). Role of social media in online travel information search. *Tourism Management*, 31(2), 179–188.
<https://doi.org/10.1016/j.tourman.2009.02.016>

- Xie, C., Zhang, J., Huang, Q., Chen, Y., & Morrison, A. M. (2022). An analysis of user-generated crisis frames: Online public responses to a tourism crisis. *Tourism Management Perspectives*, 41. <https://doi.org/10.1016/j.tmp.2021.100931>
- Yan, Y., Chen, J., & Wang, Z. (2020). Mining public sentiments and perspectives from geotagged social media data for appraising the post-earthquake recovery of tourism destinations. *Applied Geography*, 123. <https://doi.org/10.1016/j.apgeog.2020.102306>
- Yang, E., Kim, J., & Pennington-Gray, L. (2021). Social media information and peer-to-peer accommodation during an infectious disease outbreak. *Journal of Destination Marketing and Management*, 19. <https://doi.org/10.1016/j.jdmm.2020.100538>
- Yang, F. X., & Wong, I. A. (2021). The social crisis aftermath: tourist well-being during the COVID-19 outbreak. *Journal of Sustainable Tourism*, 29(6), 859–878. <https://doi.org/10.1080/09669582.2020.1843047>
- Yin, R. K. (2017). *Case Study Research and Applications: Design and Methods*. Washington, DC: Sage Publications.
- Yoo, K. & Gretzel, U. (2011). Influence of personality on travel-related consumer-generated media creation. *Computers in Human Behavior*, 27(2), 609–621. <https://doi.org/10.1016/j.chb.2010.05.002>
- Zeng, B., & Gerritsen, R. (2014). What do we know about social media in tourism? A review. *Tourism Management Perspectives*, 10, 27-36. <https://doi.org/10.1016/j.tmp.2014.01.001>
- Zenker, S., & Kock, F. (2020). The coronavirus pandemic - A critical discussion of a tourism research agenda. *Tourism Management*, 81, 104164. <https://doi.org/10.1016/j.tourman.2020.104164>
- Zhai, X., & Luo, Q. (2018). The secondary crisis communication of Occupy Central on Weibo: A response to Denis Tolkach. *Tourism Management*, 69, 38–41. <https://doi.org/10.1016/j.tourman.2018.05.009>
- Zhai, X., Luo, Q., & Wang, L. (2020). Why tourists engage in online collective actions in times of crisis: Exploring the role of group relative deprivation. *Journal of Destination Marketing and Management*, 16. <https://doi.org/10.1016/j.jdmm.2020.100414>
- Zhai, X., Zhong, D., & Luo, Q. (2019). Turn it around in crisis communication: An ABM approach. *Annals of Tourism Research*, 79(October). <https://doi.org/10.1016/j.annals.2019.102807>
- Zhang, X., Cheng, L., & Liu, L. (2022). Coronavirus-induced self-focused adaptation efforts in tourism: asymmetric modelling approach. *Current Issues in Tourism*, 25(17), 2870–2886. <https://doi.org/10.1080/13683500.2021.1999909>
- Zizka, L., & Chen, M. M. (2023). “Sanitary measures, social distancing, safety”: The evolution of Swiss hoteliers’ Covid-19 communication through three snapshots. *Tourism and Hospitality Research*. <https://doi.org/10.1177/14673584231162279>
- Zollo, L., Rialti, R., Marrucci, A., & Ciappei, C. (2022). How do museums foster loyalty in tech-savvy visitors? The role of social media and digital experience. *Current Issues in Tourism*, 25(18), 2991–3008. <https://doi.org/10.1080/13683500.2021.1896487>
- Zuo, B., Tsai, C. H. (Ken), Su, C. H. (Joan), Jantes, N., Chen, M. H., & Liu, J. (2023). Formation of a tourist destination image: Co-occurrence analysis of destination promotion videos. *Journal of Destination Marketing and Management*, 27, 100763. <https://doi.org/10.1016/j.jdmm.2023.100763>

Appendices

Appendix A

Table A.1. Articles considered for the systematic literature review

Authors	Year	Title	Source Title
Aguado-Correa, Rabadán-Martín, & Padilla-Garrido	2022	COVID-19 and the accommodation sector: first measures, and online communications strategies. A multiple case study in a Spanish province	Investigaciones Turísticas
Arlikatti, Taibah, Maghelal, Andrew, & Alkhurayyif	2022	Hajj Pilgrims' Perceptions of Trust and Internet Use for (Emergency) Information	International Journal of Religious Tourism and Pilgrimage
Avraham	2021	Recovery strategies and marketing campaigns for global destinations in response to the Covid-19 tourism crisis	Asia Pacific Journal of Tourism Research
Avraham & Ketter	2017	Destination image repair while combatting crises: tourism marketing in Africa	Tourism Geographies
Azer, Blasco-Arcas, & Harrigan	2021	#COVID-19: Forms and drivers of social media users' engagement behavior toward a global crisis	Journal of Business Research
Baksi, Parida, & Mahapatra	2022	Application of Social Media Analytics in Assessing Decision Insights of Tourists under Disruption	Nmims Management Review
Balinska & Jaska	2022	The utility of media-delivered information for Generation Z travelers from Poland in the Covid-19 pandemic	Ekonomia I Prawo-Economics and Law
Barbe & Pennington-Gray	2018	Using situational crisis communication theory to understand Orlando hotels' Twitter response to three crises in the summer of 2016	Journal of Hospitality and Tourism Insights
Barbe, Pennington-Gray, & Schroeder	2018	Destinations' response to terrorism on Twitter	International Journal of Tourism Cities
Becken, Friedl, Stantic, Connolly, & Chen	2021	Climate crisis and flying: social media analysis traces the rise of "flightshame"	Journal of Sustainable Tourism
Carvache-Franco, Carvache-Franco, & Carvache-Franco	2022	Coastal and marine topics and destinations during the COVID-19 pandemic in Twitter's tourism hashtags	Tourism and Hospitality Research
Carvache-Franco, Viquez-Paniagua, Carvache-Franco, Perez-Orozco & Carvache-Franco	2022	Risk perception and crisis communication during the Covid-19 pandemic: Analysis based on Twiter hashtags	Tec Empresarial
Chen, Zhang, & Wang	2022	Dire Straits: How tourists on the Diamond Princess cruise endured the COVID-19 crisis	Tourism Management
Dimitriou & Antoniou	2017	Monitoring social network formation and information content analysis of transport anomalies: The case of airline crashes	Journal of Air Transport Management
Erragcha & Babay	2022	Effects of Media Coverage and Perceived Risk during COVID-19: Moderated Mediation Model	African Journal of Hospitality, Tourism and Leisure
Femenia-Serra, Gretzel, & Alzua-Sorzabal	2022	Instagram travel influencers in #quarantine: Communicative practices and roles during COVID-19	Tourism Management
Filieri, Yen, & Yu	2021	#ILoveLondon: An exploration of the declaration of love towards a destination on Instagram	Tourism Management

Fukui & Ohe	2020	Assessing the role of social media in tourism recovery in tsunami-hit coastal areas in Tohoku, Japan	Tourism Economics
Gkritzali, Mavragani, & Gritzalis	2020	Negative MWOM and value co-destruction during destination crises	Business Process Management Journal
Gonzalez, Camarero, & San Jose Cabezudo	2021	SOS to my followers! The role of marketing communications in reinforcing online travel community value during times of crisis	Tourism Management Perspectives
Hvass	2013	Tourism social media and crisis communication: An erupting trend	Tourism Social Science Series
Ingrassia, Bellia, Giurdanella, Columba, & Chironi	2022	Digital Influencers, Food and Tourism—A New Model of Open Innovation for Businesses in the Ho.Re.Ca. Sector	Journal of Open Innovation: Technology, Market, and Complexity
Joseph & Anandkumar	2021	Destination Brand Communication during COVID-19 Pandemic - The Case of Iceland	International Journal of Hospitality and Tourism Systems
Ketter	2016	Destination image restoration on Facebook: The case study of Nepal's Gurkha Earthquake	Journal of Hospitality and Tourism Management
Lenggogeni, Ashton, & Scott	2022	Humour: coping with travel bans during the COVID-19 pandemic	International Journal of Culture, Tourism, and Hospitality Research
Li & Scott	2020	Fake news travels fast: Exploring misinformation circulated around Wu Lei's coronavirus case	International Journal of Sport Communication
Li, Wang, Filieri, & Zhu	2022	Eliciting positive emotion through strategic responses to COVID-19 crisis: Evidence from the tourism sector	Tourism Management
Liu, Pennington-Gray, & Klemmer	2015	Using social media in hotel crisis management: The case of bed bugs	Journal of Hospitality and Tourism Technology
Liu, Pennington-Gray, Donohoe, & Omodior	2015	New York City bed bug crisis as framed by tourists on tripadvisor	Tourism Analysis
Liu-Lastres, Kim, & Ying	2020	Learning from past crises: Evaluating hotels' online crisis responses to health crises	Tourism and Hospitality Research
Luo & Zhai	2017	"I will never go to Hong Kong again!" How the secondary crisis communication of "Occupy Central" on Weibo shifted to a tourism boycott	Tourism Management
Mason, Flores, Liu, Tims, Spencer, & Gire	2019	Disaster communication: An analysis of the digital communication strategies used by the medical tourism industry during the 2017 Caribbean hurricane season	Journal of Hospitality and Tourism Insights
Möller, Wang, & Nguyen	2018	#Strongerthanwinston: Tourism and crisis communication through Facebook following tropical cyclones in Fiji	Tourism Management
Morgan, Wilk, Sibson, & Willson	2021	Sport event and destination co-branding: Analysis of social media sentiment in an international, professional sport event crisis	Tourism Management Perspectives
Munteanu, Rizea, Ilie, & Sarbu	2014	Investigating potential strategies for increasing tourism competitiveness at the Black Sea shore	Amfiteatru Economic
Muritala, Hernández-Lara, Sánchez-Rebull, & Perera-Lluna	2022	#CoronavirusCruise: Impact and implications of the COVID-19 outbreaks on the perception of cruise tourism	Tourism Management Perspectives

Nadeau, Wardley, & Rajabi	2022	Tourism destination image resiliency during a pandemic as portrayed through emotions on Twitter	Tourism and Hospitality Research
Nilashi, Abumalloh, Minaei-Bidgoli, Zogaan, Alhargan, Mohd, Azhar, Asadi, & Samad	2022	Revealing travellers' satisfaction during COVID-19 outbreak: Moderating role of service quality	Journal of Retailing and Consumer Services
Obembe, Kolade, Obembe, Owoseni, & Mafimisebi	2021	Covid-19 and the tourism industry: An early stage sentiment analysis of the impact of social media and stakeholder communication	International Journal of Information Management Data Insights
Oliveira & Huertas	2019	How do destinations use twitter to recover their images after a terrorist attack?	Journal of Destination Marketing & Management
Pachucki, Grohs, & Scholl-Grisseemann	2022	Is nothing like before? COVID-19–evoked changes to tourism destination social media communication	Journal of Destination Marketing and Management
Park, Kim, & Choi	2019	Application of social media analytics in tourism crisis communication	Current Issues in Tourism
Pasquinelli, Trunfio, Bellini, & Rossi	2022	Reimagining urban destinations: Adaptive and transformative city brand attributes and values in the pandemic crisis	Cities
Penco, Profumo, Remondino, & Bruzzi	2019	Critical events in the tourism industry: factors affecting the future intention to take a cruise	International Journal of Contemporary Hospitality Management
Pennington-Gray & Schroeder	2013	The social media capital of the universe: What does this mean for brazilian tourists to the us?	Tourism, Culture and Communication
Perakakis, Trihas, Venitourakis, Mastorakis, & Kopanakis	2016	Social media as a marketing tool for Greek destinations	Tourismos
Priporas, Stylos, & Kamenidou	2020	City image, city brand personality and generation Z residents' life satisfaction under economic crisis: Predictors of city-related social media engagement	Journal of Business Research
Qiu, Liu, Stienmetz, & Yu	2021	Timing matters: crisis severity and occupancy rate forecasts in social unrest periods	International Journal of Contemporary Hospitality Management
Rather	2021	Demystifying the effects of perceived risk and fear on customer engagement, co-creation and revisit intention during COVID-19: A protection motivation theory approach	Journal of Destination Marketing & Management
Roth-Cohen & Lahav	2022	Cruising to nowhere: Covid-19 crisis discourse in cruise tourism Facebook groups	Current Issues in Tourism
Schroeder & Pennington-Gray	2015	The Role of Social Media in International Tourist's Decision Making	Journal of Travel Research
Schroeder & Pennington-Gray	2014	Perceptions of crime at the Olympic Games: What role does media, travel advisories, and social media play?	Journal of Vacation Marketing
Schroeder, Pennington-Gray, Donohoe, & Kioussis	2013	Using Social Media in Times of Crisis	Journal of Travel and Tourism Marketing
Schroeder, Pennington-Gray, Kim, & Liu-Lastres	2018	Using the media's tweets to broaden previous conceptualizations of political travel risks	Tourism Management Perspectives
Schweinsberg, Darcy, & Beirman	2020	'Climate crisis' and 'bushfire disaster': Implications for tourism from the	Journal of Hospitality and Tourism Management

			involvement of social media in the 2019–2020 Australian bushfires	
Solazzo, Maruccia, Ndou, & Del Vecchio	2022		How to exploit Big Social Data in the Covid-19 pandemic: the case of the Italian tourism industry	Service Business
Song, Liu, Guo, Yang, & Jin	2022		Does hotel customer satisfaction change during the COVID-19? A perspective from online reviews	Journal of Hospitality and Tourism Management
Su, Stepchenkova, & Kirilenko	2019		Online public response to a service failure incident: Implications for crisis communications	Tourism Management
Tolkach	2018		A view of Occupy Central impacts on Hong Kong tourism from the other side of the Great Firewall: A rejoinder to Luo & Zhai	Tourism Management
Wang, Sirakaya-Turk, & Aydin	2019		The impact of millennium floods on vacation decisions in a coastal tourism destination: The case of South Carolina, USA	Tourism Analysis
Willson, Wilk, Sibson, & Morgan	2021		Twitter content analysis of the Australian bushfires disaster 2019-2020: futures implications	Journal of Tourism Futures
Xie, Zhang, Huang, Chen, & Morrison	2022		An analysis of user-generated crisis frames: Online public responses to a tourism crisis	Tourism Management Perspectives
Yan, Chen, & Wang	2020		Mining public sentiments and perspectives from geotagged social media data for appraising the post-earthquake recovery of tourism destinations	Applied Geography
Yang & Wong	2020		The social crisis aftermath: tourist well-being during the COVID-19 outbreak	Journal of Sustainable Tourism
Yang, Kim, & Pennington-Gray	2021		Social media information and peer-to-peer accommodation during an infectious disease outbreak	Journal of Destination Marketing and Management
Zhai & Luo	2018		The secondary crisis communication of Occupy Central on Weibo: A response to Denis Tolkach	Tourism Management
Zhai, Luo, & Wang	2020		Why tourists engage in online collective actions in times of crisis: Exploring the role of group relative deprivation	Journal of Destination Marketing and Management
Zhai, Zhong, & Luo	2019		Turn it around in crisis communication: An ABM approach	Annals of Tourism Research
Zhang, Cheng, & Liu	2022		Coronavirus-induced self-focused adaptation efforts in tourism: asymmetric modelling approach	Current Issues in Tourism
Zollo, Rialti, Marrucci, & Ciappei	2022		How do museums foster loyalty in tech-savvy visitors? The role of social media and digital experience	Current Issues in Tourism

Appendix B

Table B.1. Example of DMO's social media messages content to dealing with the COVID-19 pandemic

Category	Message
Promotion of tourist attractions and spaces	Portugal (Instagram, 03/20/2020): "A bit of clichéd landscape never hurt anyone! Here's one of the magical views of the Azores, especially for you. [Photo by: @icevanadventure] #CantSkipPortugal". Brazil (Facebook, 05/25/2020): "Brazil is the country of beaches, rivers and waterfalls. This one is cachoeira das araras located in Palmas in the state of Tocantins."
Promotion of safety	Portugal (Facebook, 06/09/2020): "#Portugal is the first European country to receive the World Travel & Tourism Council's Safe Travels Certification. This seal aims to recognize destinations that comply with health and hygiene protocols in line with the Safe Travel Protocols issued by the WTTC. More info: https://bit.ly/2XJQE07/ https://bit.ly/3cNGC2w #SafeTravels".
Promotion of external websites or other media	Portugal (Twitter, 03/20/2020): "Check out @HendyStreetPros's brand new Virtual Tour of Tomar https://bit.ly/3bat9l9 Take a free trip to #Portugal without the long TSA lines or using hand sanitizer. A 360 virtual tour of the final castle that the Knights Templar commissioned. #CantSkipHope."
Pandemic information	Portugal (Twitter, 06/16/2020): "Please see available information: COVID-19 status: http://bit.ly/2WAQ5pp and FAQs: http://bit.ly/2VkGBxI And official information for all EU countries here: https://reopen.europa.eu/em ".
Factual information	Brazil (Instagram, 04/20/2020): "Brasília, the country's built-from-scratch capital of Brazil, was inaugurated 60 years ago and hosts many architectural masterpieces. The Juscelino Kubitschek bridge is one of them and it can be even more beautiful seen from above. Happy anniversary to this amazing city! :@gabrielsimn #VisitBrasil #Brasilia #travel #architecture"
Opinion and Review	Portugal (Twitter, 04/07/2020): "#Portugal's #Algarve Coast is the #1 option for Living And Retiring Overseas Post The Coronavirus according to @Forbes https://bit.ly/2XhCkwv Thanks to its Year-round Sunshine, Safety, Good Infrastructure, International Standard Health Care, Golf, Great Beaches... #CantSkipHope"
Non-tourist information	Portugal (Twitter, 11/19/2020): "Why #Portugal is your best bet for #investment migration? https://bit.ly/3ksJ4zj via @gulf_news A welcoming, safe, English-speaking and tax-friendly environment works to its advantage #LivingInPortugal #economics #business"
Call to Action - Asking or answering a trivia question	Portugal (Instagram, 09/04/2020): "Can you guess where in Portugal is this beach? [Photo: @sara_vianna] #CantSkipPortugal #Madeira"
Call to Action - Announcing of an ongoing contest	Portugal (Twitter, 11/10/2020): "We care about our planet & our oceans, let's fight waste together! We're calling all shapers to create surfboards waste found in the ocean. Winning boards will be used by world's best surfers in 2021 info http://unwantedshapes.com #TheUnwantedShapes @MEOpt @wsl"
Customer Service - Reply to an information request	Portugal (Twitter, 08/05/2020): "Hi @algarvejim, All info and contacts: Portugal Health Passport: https://portugalhealthpassport.com ; Portugal Travel Insurance: http://portugaltravelinsurance.com ; More info and FAQs here: https://portugalcleanandsafe.com/en/visiting #Portugal #safetravels".
General	Portugal (Instagram, 10/19/2020): "Happy Monday, everyone! Let's have a summer throwback and start this week with all the good vibes. [Photo: @blank_amarillo] #CantSkipPortugal #Algarve". Brazil (Facebook, 04/08/2020): "Day after day we still here, prepared to receive your visit soon. The sun will come up tomorrow! Of that we are sure! @douglas Guide and Photographer from Rio de Janeiro – RJ"

Table B.2. Classification of messages distributed by Brazil and Portugal DMOs on social media during the COVID-19 pandemic.

Category	Brazil												Portugal											
	Total message						Crisis-related message						Total message						Crisis-related message					
	Facebook		Instagram		Twitter		Facebook		Instagram		Twitter		Facebook		Instagram		Twitter		Facebook		Instagram		Twitter	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Promotion	23	70%	29	74	12	63	6	60%	8	21	0	0%	217	66	235	67	319	38	40	16	4	16	57	36
• Official website and other DMO media	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	1	0%	0	0%	0	0%	0	0%	0	0%	0	0%
• External websites and other media	0	0%	1	3	0	0%	0	0%	1	3	0	0%	14	4	0	0%	40	5	10	15	0	0%	18	11
• DMO campaign	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	14	4	10	3	33	4	0	0%	0	0%	3	2
• Destination	23	70%	28	72	12	63	6	18	7	18	0	0%	188	57	225	64	246	29	30	46	4	16	36	23
Arts and crafts	1	3%	1	3	0	0%	1	3	1	3	0	0%	5	2	0	0%	7	1	0	0%	0	0%	0	0%
Celebration and events	5	15%	5	13	6	32	2	6	2	5	0	0%	17	5	0	0%	27	3	2	3	0	0%	4	3
Food and drink	2	6%	2	5	0	0%	1	3	2	5	0	0%	31	9	3	1	37	4	1	2	0	0%	1	1
Infrastructure and facilities	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	4	1	1	0%	12	1	1	2	0	0%	1	1
Music, dance, language, literature	2	6%	2	5	0	0%	2	6	2	5	0	0%	16	5	0	0%	14	2	0	0%	0	0%	0	0%
Safety	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	17	5	0	0%	24	3	17	26	0	0%	24	15
Tourism experience	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	8	2	2	1	11	1	1	2	0	0%	1	1
Tourist attractions and spaces	13	39%	18	46	6	32	0	0%	0	0%	0	0%	90	27	219	63	114	14	8	12	4	16	5	3
Information	7	21%	8	21	6	32	2	6	3	8	1	5	71	22	5	1	427	51	14	22	2	8	67	42
• Pandemic information	1	3%	2	5	1	5	1	3	2	5	1	5	10	3	2	1	31	4	10	15	2	8	31	19
• Factual information	5	15%	5	13	5	26	0	0%	0	0%	0	0%	16	5	1	0%	27	3	2	3	0	0%	3	2
• Opinion and Review	1	3%	1	3	0	0%	1	3	1	3	0	0%	34	10%	0	0%	334	40%	2	3	0	0%	32	20%
• Non-tourist information	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	11	4	2	1	35	4	0	0%	0	0%	1	1
Customer Service	0	0%	1	3	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	54	6	0	0%	0	0%	24	15
• Responding to a criticism/compliment	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	5	1	0	0%	0	0%	0	0%
• Thanking users	0	0%	1	3	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	7	1	0	0%	0	0%	0	0%
• Reply to an information request	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	42	5	0	0%	0	0%	24	15
Call to Action	2	6%	0	0%	0	0%	1	3	0	0%	0	0%	31	9	74	21	28	3	4	6	6	24	2	1
• Collaboration request	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	3	1	1	0%	4	0%	0	0%	0	0%	0	0%
• UGC request	1	3%	0	0%	0	0%	1	3	0	0%	0	0%	3	1	2	1	4	0%	1	2	0	0%	0	0%
• Asking or answering a trivia question	1	3%	0	0%	0	0%	0	0%	0	0%	0	0%	5	2	69	20%	6	1	1	2	5	20%	0	0%
• Announcing an ongoing contest	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	14	4	1	0%	10	1	2	3	1	4	2	1
• Announcing the contest winner	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	6	2	1	0%	4	0%	0	0%	0	0%	0	0%
General	1	3%	1	3%	1	5%	1	3	1	3	1	5	9	3	36	10%	14	2	7	11	13	52	9	6
Total	33	100%	39	100%	19	100%	10	100%	12	100%	2	100%	328	100%	350	100%	842	100%	65	100%	25	100%	159	100%