Communication for destinations' image in crises and disasters: A review and future research agenda

Abstract

Purpose: This study provides an overview, the state-of-the-art 'research fronts', the emerging themes of investigation and a research agenda of crisis communication for destinations' image.

Methodology: The research is conducted with a bibliographic coupling study, complemented with an *H-Classic* classification and a thematic analysis of the articles included in the four clusters provided by the bibliometric methodology (papers dating from 2017 to 2021, both years included).

Findings: Based on the bibliometric analysis, four thematic clusters were identified. Two of these clusters supply the 'research fronts', the most current themes in a scientific field: Cluster 1 addresses communication related to tourists' safety, and cluster 2 enhances the role of stakeholders' collaboration to create destinations resilience in crisis communication. The other two clusters highlight emerging themes for future investigation: Cluster 3 focuses on recovery marketing communication strategies for a post-crisis era and cluster 4 analyses how crisis communication strategies contribute to reduce tourists' risk perception and boosting travel intention. Finally, a future research agenda is proposed, based on the emerging themes from the study.

Originality/value: To the best of our knowledge, this is the first bibliometric study to analyse crisis communication for destinations' image (pre-crisis, crisis, and post-crisis). The study, which covers the most recent academic literature in this field, provides insights of communication strategies from recent crises and disasters within the 'research fronts'. Besides, a research agenda useful for future scholar investigation is proposed with its emerging themes. These rising topics and learnings from past events could be used by destination marketing organisations' (DMOs) in crisis communication

for destination image recovery in the current post-pandemic scenario or in upcoming crises or disasters.

Introduction

Crises and disasters occur due to different causes—like natural disasters, terrorist attacks and financial crises—and the tourism sector can be significantly impacted by these incidents (Cakar, 2018). Specifically, a tourism crisis for a destination is defined as some circumstances or events that can severely damage the image or reputation of a destination (Schroeder *et al.*, 2018).

The COVID-19 pandemic has been an unprecedented crisis with severe effects on the tourism sector (Sanchez-Perez *et al.*, 2021). According to the UNTWO World Tourism Barometer, 2020 was the worst year on record for tourism. In 2021, international tourists' arrivals decreased by 72% compared with 2019 pre-pandemic data (UNWTO, 2022).

To diminish the negative consequences of the crises and disasters in destinations' images, the stakeholders in tourism like Destinations Marketing Organisations (DMOs) have adopted different management measures over time, and communication has played a substantial role in these measures to repair them (Li *et al.*, 2020). Besides, the scope and credibility of the media in this communication can influence tourists' perceptions of destinations' images and, therefore, their future travel intention (Zenker *et al.*, 2019).

During its three phases (pre-crisis, crisis, and post-crisis), crisis communication is vital for crisis management strategies, as it involves the collection, processing, and dissemination of information needed to address the crisis (Coombs, 2010). In the pre-crisis or pre-disaster stage, destinations tend to base crisis communication strategies on mitigation and prevention planning to reduce the possible negative effects that future events can cause on destinations' image (Chan, Nozu and Cheung, 2020a).

During crises or disasters, strategies tend to be focused on a reduction in tourists' risk perception, while post-crisis communications may be focused to secure and build destinations' image (Sigala, 2020).

Communication for destinations' image has not received specific attention in previous bibliometric analyses of tourism crisis and disaster management (TCDM) (Mair et al., 2016), and the academic literature on TCDM is fragmented and disjointed (Jiang, Ritchie and Benckendorff, 2019). To address this knowledge gap, this paper aims to provide an in-depth examination of the most current crisis and disaster communication studies (dated 2017–2021, both included) through a bibliographic coupling, complemented by a *H-Classics* classification and a thematic analysis of the articles in this research. Bibliometric methods are used to identify new topics in a scientific discipline and their behaviour over time (Fernandez-Alles and Ramos-Rodríguez, 2009). Besides, the bibliographic coupling is considered the most appropriate bibliometric method to determine the emerging research themes in a field of knowledge. (Zupic and Čater, 2015). The thematic analysis contributes to an in-depth study of the common research topics of previous academic literature and which of them require future investigation, possibly with an updated perspective since the pandemic.

Subsequently, this study presents a general perspective, the 'research fronts'- the state-of-the-art topics-, and emerging themes of investigation in crisis communication for destinations' image. The 'research fronts' provide learnings of the main topics in the most current academic literature in this field, while the emerging themes assist to develop a future research agenda. These insights can be utilised by DMOs in their communication strategies for destination image recovery in future crises or disasters or in a post-crisis or post-disaster era.

Literature review

Crises and disasters in tourism

In the tourism sector, a crisis is an unpredictable event related to safety, health, or environmental issues with several consequences for all the stakeholders in this sector (Su *et al.*, 2019). Sometimes, the term 'disaster' is utilised with the same meaning as 'crisis', but the key distinction according to Mason *et al.*, (2019) is that crises are 'organisationally-based' and disasters are 'community-based'. Other scholars apply the characteristics 'man-made' (crisis) and 'natural' (disaster) to distinguish between the two topics. The term disaster is an unpredictable event, and a crisis can be defined as an unexpected adverse incident that may be self-inflicted (Cakar, 2018).

Besides, there is not a clear consensus on the classification of tourism crises and disasters in academic literature. Following the distinction between natural and man-made events, they can be divided into financial or economic crises, wars and terrorist attacks, political instability, health crises or natural disasters (Cakar, 2018).

The tourism industry can be exposed to different events at any time and affected, both in terms of revenue and image (Liu and Pennington-Gray, 2015). Particularly during health crises, the sensation of risk, a lack of safety and even the threat of death increase among travellers, and these perceptions can make tourists change or even cancel travel plans (Liu & Pennington-Gray, 2015). The specific characteristics of COVID-19 pandemic- duration, globalisation, lockdown, social distancing, or restrictions on movements- have severely impacted on tourism sector since the outbreak of the crisis in 2020 (Ahmad *et al.*, 2021). The global social and economic transformations resulting from this crisis are evident, while the post-crisis effects on the tourism industry will be uneven in space and time (Hall *et al.*, 2020).

Tourism crisis and disaster management (TCDM)

As tourism industry is particularly vulnerable to the effects of crises and disasters, tourism-related organisations need to be prepared to counter their impacts and design recovery strategies (Yeh, 2021). Some studies defined this planification as tourism crisis and disaster management (TCDM)

(Jiang, Ritchie and Benckendorff, 2019). Therefore, TCDM is considered as essential both at an organisational and destination level. Effective strategies should include three steps: planning and preparedness before a crisis or a disaster, response while the event occurs and resolution or improved state in a post-crisis or post-event era (Mair *et al*., 2016).

Over time, public organisations and private agents developed different TCDM strategies and diverse management models have been implemented (Jiang, Ritchie and Verreynne, 2019) . One of these models, for example, provided a framework to help position disaster impacts in a destination context (Pennington-Gray, 2014) , while others have focused on the collaboration of all the stakeholders during a crisis to contribute to the creation of destinations' resilience (Chan, Nozu and Zhou, 2020).

Bibliometric literature on TCDM

Prior to the COVID-19 pandemic, some authors claimed for a systematic and objective analysis of the TCDM literature through bibliometric studies to understand research patterns and to identify future themes of investigation (Jiang, Ritchie and Benckendorff, 2019). Despite Mair *et al*., (2016) conducted a qualitative and quantitative systematic approach on post-disaster and post-crisis recovery for destinations, this methodology can be perceived as less objective than a bibliometric method (Jiang, Ritchie and Benckendorff, 2019).

The review made by Ritchie and Jiang, (2019) provided an overview of the key findings and methodological approaches in TCDM research, but this traditional technique was also considered subjective (Duan *et al*., 2021). The bibliometric analysis by Duan *et al*., (2021) on the impact of crises in touristic destinations, and the literature reviews by Wut et al., (2021) about hospitality and tourism industry crisis management, and by Sofyan *et al*., (2021)- on halal tourism crisis and disaster management- complemented the previous reviews in TCDM. However, as these three studies analysed periods of time until 2020, the prolific COVID-19 pandemic literature from 2021 was not included.

Thematic areas in TCDM

Traditionally, the main topics in TCDM empirical studies were tourists' perceived risk (Cui *et al.*, 2016), travel intention (Teeroovengadum *et al.*, 2021), tourists' travel behaviour (Liu et al., 2021), destinations resilience (Bethune *et al.*, 2022), tourism industry resilience (Aldao *et al.*, 2021), hospitality resilience, (Li *et al.*, 2021), or social media (Molinillo *et al.*, 2018). However, a global perspective of the relationship of these topics with destination image communication in TCDM through bibliometric analysis, a methodology that presents the mapping of a research field without subjective bias (Zupic and Čater, 2015), has been lacking. Moreover, thematic analysis in this research, which contributes by identifying and organising relationships between themes in a scientific discipline (Klavenes *et al.*, 2020), complements the results of the bibliometric method.

Crisis communication

Crisis communication is a key factor of crisis management to combat crises and disasters and to lessen damage. Crisis communication can be defined as a critical component of crisis management (in its three stages, pre-crisis, crisis, and post-crisis) and is comprised of the collection, processing, and dissemination of information required to address a crisis (Coombs, 2010). Precisely in TCDM, crisis communication focuses on the prevention and reduction of harm (Wong *et al.*, 2021), as it is presumed to bridge gaps between the tourism industry and their audiences, and to restore tourists' confidence and businesses' reputations (Liu-Lastres, 2022). For destinations, crisis communication practices are related to media coverage, recovery campaigns, marketing initiatives, information to stakeholders, and the removal of negative perceptions (Ketter and Avraham, 2021) .

According to Coombs, (2021), in the pre-crisis stage, which includes signal detection, prevention, and crisis preparation, pro-active actions should be taken to prevent or alleviate a crisis. This preparation is crucial to establish the capacity to create resilience. For destinations' image in the pre-crisis stage,

crisis communication strategies tend to focus on impact prevention and mitigation planning for a possible future event (Chan, Nozu and Cheung, 2020a) .

 During the crisis, the process commences with crisis recognition, followed by a phase of crisis containment. During this phase, communication with stakeholders is vital, and the response reaction allows individuals and organisations to demonstrate resilience (Coombs, 2021). In both stages, the aim of communication strategies is to protect destinations' image, to maintain the flow of visitors, and to establish relationships with other stakeholders in the tourism sector (Ketter and Avraham, 2021).

In the post-crisis stage, where the crisis is resolved and deemed to be over, organisations can evaluate crisis management, the learnings from the crisis, follow-up communication with stakeholders, mourning, and monitoring of the crisis. The ability to recover in this phase is directly associated to resilience (Coombs, 2021). For destinations, it is the occasion to promote positive and uplifting messages that may help to reinforce the destinations brand, and to estimate the impacts of crisis communication on tourists' travel intentions and attitudes and on destination image, to be prepared for future events (Sigala, 2020).

The media in TCDM

During a crisis or disaster affecting the tourism sector, media coverage can be a challenge due to its capacity to exacerbate or mitigate the impacts of the situation (Park *et al.*, 2019). Traditional models of disaster communication highlighted the role of public organisations which disseminate messages through mass media to the public (Mason *et al.*, 2019). Recent studies have recognised the relevance of social media with bidirectional communication to create communities and engage customers, especially during the process of post-disaster recovery, where marketing communications are perceived to be essential (Oltra-Gonzalez *et al.*, 2021). Other authors highlight their utility in DMOs crisis communication strategies destined to repair destinations' image, where residents can be

encouraged to participate (Liu-Lastres and Cahyanto, 2021). Currently, in the post-digital era, the impacts of both the media and their messages should be considered to succeed in effective crisis responses (Coombs, 2021).

To the best of our knowledge, this research is based on the first bibliographic coupling that analyses all the stages of crisis communication specific for destinations' image. This methodology provides 'research fronts' and emerging themes used to configure a research agenda for scholars.

On the basis of this assertation, the following research questions are proposed in this study:

RQ1.- What are the state-of-the-art key themes of crisis communication for destinations' image?

RQ2.- What are the emerging themes of research on crisis communication for destinations' image?

RQ3.- What should be the next steps for researchers on this field to move the academic research agenda forward from its current position?

Methodology

A bibliometric coupling analysis was performed on articles downloaded from Web of Science (WoS) in April 2022, following the recommendations of Zupic and Čater, (2015). It was complemented with an *H-Classics* classification, based on the methodology proposed by Martínez *et al.*, (2014) and a qualitative thematic analysis, validated by Braun and Clarke, (2006). To identify a representative collection of research in this field, the methodology system included in the PRISMA 2020 statement, which updates the PRISMA 2009 statement, was applied. PRISMA- the Preferred Reporting Items for Systematic Reviews and Meta-Analyses- is a reporting guideline designed to address poor reporting within systematic reviews (Page *et al.*, 2021). Data collection procedures, including the inclusion and selection criteria and the different stages of the search, are presented in Figure 1.

During the identification phase, 793 records were obtained from WoS with the search criteria: TOPIC = destination AND (crisis OR disaster) AND (communication OR media OR image OR recovery).

The screening phase was divided into two steps. In the first one, the following exclusion criteria were utilised: date (2017-2021 years, both included), type of article (article, early access and review article), language (English) and Index (Social Sciences Citation Index-SSCI). Therefore, from the original corpus of 793 records, 580 were excluded, and 213 articles were assessed for eligibility.

Eligibility was contemplated in the second step of the screening phase. The criteria exclusion was determined with a thorough review of the papers. Despite meeting the search criteria, the content of the papers was not directly related to the research topic, as they lacked a focus on tourism sector, destinations, crisis, disaster or communication. In this second step of the screening phase, 84 papers were eliminated. Therefore, this study was based on a final corpus of 129 articles. (See Figure 1).

[Figure 1]

The articles in this research were exclusively extracted from WoS. Although other databases, such as Scopus or Google Scholar, report the number of citations received, many studies consider WoS as the most reliable database to employ bibliometric methodologies in the management and organisation fields (Zupic and Cater, 2015). In particular, the majority of the scholars who applied bibliographic coupling in tourism research used this data base, e.g. (Koseoglu *et al.*, 2016) , (Atsiz *et al.*, 2022), (Mulet-Forteza *et al.*, 2021), or (Shekhar *et al.*, 2021), likewise in different disciplines, such as technology (Wang *et al.*, 2019), sustainability (Mas-Tur *et al.*, 2019) or corporate social responsibility (Mariani *et al.*, 2021), among others. However, in the last years, Scopus has begun to challenge WoS' dominating role, and is becoming widely used in diverse

scientific fields in bibliometric studies and meta-analysis research, especially in China (Zhu and Liu, 2020).

While a combination of these two data bases may increase the number of analysed papers in any research, in this particular case, WoS was selected since it provides the most adequate normalised process for reference codification necessary for bibliographic coupling. The measure of similarity between documents in this technique is based on the number of shared references (Zupic and Čater, 2015).

Other bibliometric methods that use the number of shared references are direct citation and co-citation analyses. The direct citation technique provides the level of influence of publications within a determined field, but it is not much useful to identify interconnections between scholars. Co-citation analysis presents an overview of past research, but it cannot capture current or future ones (Zupic and Cater, 2015). Therefore, considering that the number of received citations in a paper change over time, bibliographic coupling is deemed the most valid bibliometric method for contemporary articles within a short and limited time frame of approximately five to ten years (Zupic and Čater, 2015). However, despite this disadvantage to encompass longer periods of time, bibliographic coupling is the most accurate bibliometric method to present the emerging themes of future research and the 'research fronts' in more recent, but less cited, articles (Zupic and Čater, 2015). 'Research fronts' are defined as the themes that represent the state-of-the-art research in a scientific field (Price, 1965).

In a bibliographic coupling, articles are considered the units of analysis (nodes), and their references are the coupling measures. With this methodology, the articles in this study can be sorted into different clusters, with a thematic relationship established by centrality and impact. Centrality refers to the level of interaction between clusters through their references, while

impact refers to the level of internal cohesion between nodes in each of the clusters (Cobo *et al.*, 2011).

The bibliographic coupling in this study was made with *Biblioshiny*, one of the most updated free software that uses R-tool (Aria and Cuccurullo, 2017). This software was also used to typify the sample and identify topics by year, countries and sources, and the authors' production, citations, and keywords.

Additionally, two analyses supplemented the results of the bibliometric coupling study. First, to identify the most relevant research literature in this field, *H-Classics* methodology by Martinez *et al.*, (2014) was used. This method is based on the popular *h-Index* of (Hirsch, 2005), to systematise the classical citation search procedure in any discipline.

Finally, a thematic analysis was conducted on the articles included in this study, once classified into the clusters identified by the bibliographic coupling. This technique aims to provide a qualitative analysis of data, detecting common themes or topics that are repeatedly mentioned (Braun and Clarke, 2006). Furthermore, this method contributes to the identification and organisation of relationships between themes (Klavenes *et al.*, 2020). The process was carried out manually by the authors in this paper following the guides by (Braun and Clarke, 2006) with the next stages:

a) Data recognition: Literature review and identification of provisional themes.

b) Initial code generation: Double independent codification of features with three criteria: keywords, main topics not included in keywords and other frequently occurring variables used in previous studies in this field.

c) Determination of themes: Aggregation process of codes to potential themes.

d) Themes revision: Verification of the relationship of the identified themes with the 'research fronts' and emerging themes provided by the bibliographic coupling.

e) Theme definition: Themes and sub-themes are denominated based on previous academic literature (see Table I).

f) Reporting: this qualitative analysis supports the findings of the bibliographic coupling to answer the research questions raised in this study and corroborates the identification of the 'research fronts' and the emerging themes- used to establish a research agenda.

[Table I]

Results

This study examines 129 articles written by a total of 322 authors, dated between 2017 and 2021 (both years included), which were published in 36 different academic journals.

Annual scientific production

Following the classification suggested by Cakar, (2018), five types of crises and disasters, depending on the causes, can be distinguished within the articles in this study—political instability, terrorism, natural disaster, health crisis or financial crisis–with a variable annual scientific production. Other articles related to general causes of the crises or with more than one type of crisis in the same paper are also considered, such as those by Cakar, (2021) or Avraham, (2021a).

While from 2017 to 2019, scholars did not address health crises, the COVID-19 pandemic propelled health crises to the most frequent theme in their research (36 out of 45) in 2021. In the previous year, focus was on natural disasters (14), followed by health crises (9). Figure 2 presents the dynamics of crises and disasters classification over the past five years in relation with the annual scientific production data provided by *Biblioshiny*:

[Figure 2]

Just like crisis and disaster themes, the citation scores of journals varied over time. The point of inflection was marked in 2019, when the most cited publication was *Tourism Management*,

followed by *Journal of Destination Marketing & Management*. In the past two years, other journals, less cited from 2017 to 2019, emerged at the forefront, such as *Current Issues in Tourism* or *Sustainability* (see Table II).

[Table II]

In terms of scientific production by country, China was the most prolific (71 articles), followed by the United Kingdom (34), and the United States (29).

Authors' production and citation

Regarding the number of articles published, the three most relevant authors are Avraham, E., with seven articles, Wen, J., (5), and Liu-Lastres, B., and Xie, CW., both with four articles each. Avraham, E., was also the most cited author within the scholars in this study (23 citations), followed by Wen J., (23) and Ritchie, BW., (18).

Authors's keywords and trending topics

Related to the authors' keywords, the most frequent in the study are 'COVID-19' (29 times), 'destination image' (21), and 'crisis management' (15). With the extent of the COVID-19 pandemic in 2020 and 2021, and compared with the previous years, scholars opted to increase the focus of their articles in these terms and others like 'resilience', 'disaster' or 'sustainable tourism' (see Table III).

[Table III]

The dynamics of the trending topics in this research also varied over time. For example, while 'natural disaster' and 'tourism marketing' were trending topics in 2017, 'COVID-19' and 'sustainable tourism' were the most relevant themes in 2021 and 2020, respectively.

h-Classics

With an *h-Index* of 24 provided by WoS for the analysed corpus of papers, 23 *h-Classic* documents were identified. The *h-Classic* documents of a determined research field are defined as the *h-core*

of this study, which is composed of the *h* highly cited papers, with a minimum of *h* received citations (Moral-Muñoz *et al.*, 2016) (see table IV).

[Table IV]

The article that leads this ranking of *h-Classics* documents provides an overview of the type and scale of the impacts of COVID-19 on tourism industry (Sigala, 2020). The focus of the subsequent papers in this ranking is also related to the COVID-19 pandemic: the effects of pandemics on societies and tourism sector (Hall *et al.*, 2020) , a post-COVID-19 tourism research agenda (Zenker and Kock, 2020) and the effects of COVID-19 on travel and lifestyle for Chinese tourists (Wen et al., 2021) .

Research methods

Through a manual process of quantitative count, the most used methodologies and techniques of the articles examined in this study were identified. Quantitative analysis represented nearly half of the total (44%), while qualitative analysis was utilised in 33% of the articles. The rest of the scholars (23%) opted for mixed approaches to these two methods. Table IV presents the most utilised methods and techniques (see Table V).

[Table V]

Papers that focused on marketing strategies, risk perception or resilience mostly used qualitative techniques, such as content analysis or observation. The study of crisis and disaster management is studied both with quantitative methods (mainly surveys) or qualitative ones (e.g., interviews).

Stages of crisis communication for destinations' image

A manual quantitative count was also applied to classify the articles based on the three stages of crisis communication (pre-crisis, crisis, and post-crisis). It was observed that the papers analysed in this study focused mainly on the last two phases. Only 11 out of 129 (8.5%) reflected the pre-crisis phase, and it was included with the research of the other two phases (in 10 articles, the

three phases were studied, and in the other, the pre-crisis and crisis stages were analysed). A total of 51 articles (39.5%) analysed the crisis stage, while 48 (37.3%) focused on the post-crisis phase. Besides, there was a total of 19 (14.7%) papers that combined crisis and post-crisis phase study.

Coupling analysis

The 129 papers analysed in this study were categorised into four clusters. The clusters were measured with centrality and impact parameters, which determine thematic connections within the articles in a cluster and relationships with the other clusters (Cobo *et al.*, 2011) (see Figure 3).

[Figure 3]

With crisis communication for destinations' image as a cross-cutting theme within the study, there are four main thematic blocks divided into four clusters related to the following issues: a) Tourists' safety and the media, b) Stakeholders' collaboration and destinations' resilience, c) Post-crisis marketing communication strategies, and d) Tourists' risk perception and travel intention.

Cluster 1 (51 articles): Communication of tourists' safety and the media

In accordance with the Normalised Local Citation Score, the most cited article in this cluster (7.86 score) is that by Wen *et al.*, (2021). This cluster has the second-highest centrality (0.74) and the highest impact (2.73) in the study. This means that its themes are well connected within the cluster and within the rest of the subject areas in the analysis. Therefore, these themes are considered as the 'motor themes' of the study or the 'research fronts' in this field.

The COVID-19 pandemic is the predominant crisis in this cluster, with 25 out of its 51 articles dedicated to it- e.g., (Wen *et al.*, 2021), (Bhati *et al.*, 2021), (Ahmad *et al.*, 2021) or (Liu, *et al.*, 2021), among others. Other crises from 2017 to 2021 addressed in this cluster are the refugee

crisis (Zenker *et al.*, 2019), terrorism attacks (Oliveira and Huertas, 2019), political instability (Schroeder *et al.*, 2018) and natural disasters (Hajibaba *et al.*, 2017) , (Cakar, 2021), (Cahyanto and Liu-Lastres, 2020) and (Ma *et al.*, 2020).

The concept of *safety* is one of the identified 'motor themes' in this study, corroborated with the results of the thematic analysis (see Table I). During the *COVID-19* crisis, communication messages related to destinations' image were based on it, as a lack of safety sensation negatively affects visitors' destination image perceptions (Wen *et al*., 2021). Therefore, strategies were focused on a reduction of negative emotions, to communicate *health safety*-based messages that contribute to the generation of positive destinations' image (Li *et al*., 2020). To achieve this goal, DMOs are encouraged to coordinate with tourism professionals to disseminate ethical, responsible, and accurate information about health systems' responses (Chemli *et al.*, 2021). These destination crisis communication strategies, with transparent and updated information of safety measures, contribute to reduce perceived uncertainty and may increase tourists' wellbeing (Chua *et al.*, 2021). In other type of crises or disasters (e.g., natural disasters, terrorist attacks), a destination image of safety repair is essential for tourism recovery in the post-crisis stage. The aim is to change the tourists' perception of insecurity created by these events (Ma *et al.*, 2020).

Another 'motor theme' that arose in the cluster is the *media*, and their mediating role in communication strategies to influence a destinations image perception during a crisis or disaster. Depending on the objectives of these strategies, different channels may be used: for example, when referring to public health and safety, all available channels are useful. To repair the destinations' reputation, channels may be chosen according to the target audience (Rastegar *et al.*, 2021). As the COVID-19 pandemic has occurred in the post-digital era it differs from past

events, and a combination of communication through *traditional media*, *social media*, and DMOs

websites is likely to be required (Bhati *et al.*, 2021).

Cluster 2 (52 articles): Stakeholders' collaboration and destinations' resilience in crisis

communication

The most cited article (4.11 score) is that by (Zenker and Kock, 2020). This cluster has the highest

centrality (0.88) and the second-lowest impact (2.16). This means that its articles themes are

closely related to the ones in other clusters, but there is not a strong internal thematic cohesion

between them. The high centrality of this cluster indicates that its topics are 'research fronts' in

this study.

The thematic analysis corroborates that the 'research fronts' in this cluster are related to

stakeholerds' collaboration and *destinations' resilience* in crisis communication (see Table I).

While the cooperation between tourism stakeholders and external systems (health, emergency

services and others) was proved to be essential during the COVID-19 pandemic for the touristic

industry (Zenker and Kock, 2020) , other authors enhance the tourism *stakeholder's collaboration*

in disaster management to build *destinations' resilience* (Filimonau and de Coteau, 2020) or to

improve recovery outcomes (Jiang and Ritchie, 2017). In the response, recovery and restart

phases of a crisis, resilience can only be developed using a participative process in which all major

destination actors are involved (Kuscer *et al.*, 2021). After a disaster, residents should also be

encouraged by DMOs to participate actively in their *crisis communication* strategies through

social media to contribute to improving the destinations' image (Liu-Lastres and Cahyanto, 2021).

Communication and collaboration are two of the main components of destinations' resilience,

and cooperation between the tourism industry and destinations is needed throughout the phases

of disasters. In the pre-event phase, the tourism sector should contribute to information,

provision, communications, and the preparation of materials and facilities (Chan, Nozu and

Cheung, 2020a). In the emergency and intermediate phases, collaboration should aim to provide practical information to the tourists: e.g. evacuation, emergency accommodation or assistance for departure. (Chan, Nozu and Cheung, 2020a). In the post-disaster stage, private and public agents should conjoin efforts to build destinations' resilience and image recovery in the long-term (Chan, Nozu and Cheung, 2020b).

Cluster 3 (23 articles): Post-crisis marketing communication strategies

Sigala, (2020) is the most cited article in cluster 3 (4.52 score). This cluster is the second lowest in terms of centrality (0.63) and the second highest in impact (2.17). Although these data are very similar to cluster 2 ones, the main difference is that the articles in this cluster are more related between them, but they have less relationship with the rest of the study. The low centrality establishes that these topics are emerging themes of research in this field.

According to the thematic analysis (see Table I), the focus of the articles in this cluster is on the *recovery marketing communication strategies* for *destinations' image* for a post-crisis or post-disaster scenario.

The specific characteristics of the global and prolonged COVID-19 crisis have resulted in variations in the application of traditional destinations' image recovery marketing communication strategies during a crisis (Ketter and Avraham, 2021). For example, with the 'multi-step model for altering place image' by Avraham and Ketter, (2017) it can be detected that prior to the COVID-19 pandemic and in shorter crises and disasters, message strategies were applied in the first stage of these events, followed by source strategies in the second stage, and audience strategies were only utilised in the last phase of a crisis (recovery phase). However, during the COVID-19 pandemic, marketing communication strategies were mainly focused on messages, while audience and source strategies were hardly utilised (Avraham, 2021).

In the current post-COVID-19 era, tourism academics and industry should consider this crisis as a transformational opportunity (Sigala, 2020). The pandemic has provoked global societal and economic changes, but the post-crises ones are still uneven in space and time (Hall *et al.*, 2020). As a result of the pandemic, tourists are seeking less crowded and more sustainable destinations. Communication strategies could enhance these concepts in post-pandemic strategies, or destinations could opt to return to 'business-as-usual' strategies used in periods before crises or disasters (Hall *et al.*, 2020). To restore tourism activity, the success of destinations' strategies will depend on the collaboration of different stakeholders (Ketter and Avraham, 2021), like the governments, with interventions that may contribute to improve a destinations' image in the recovery phase of a crisis, highlighting their positive brand attributes (Sigala, 2020).

For destinations' marketers, the changes imposed by the pandemic imply a shift in traditional communication models, to rebuild tourist trust and to adjust the destinations' image promise to highlight new values and travel preferences. Therefore, the content of these strategies should be based on messages of welcoming back, a COVID-19-safe destination, and restorative experiences (Ketter and Avraham, 2021).

Cluster 4 (3 articles): Tourists' risk perception and travel intention

In this cluster, the most cited article (1.23 score) is that by (Pappas, 2019). With the lowest centrality (0.52) and the lowest impact (1.22), articles in this cluster have little thematic relationship with the rest of the papers nor internal cohesion between them. This means that these topics are or disappearing ones or emerging themes of research in a scientific field. In this case, the theme codification of the thematic analysis confirms that they can be considered as emerging themes of investigation. As such, these topics, together with those identified in cluster 3, constitute a research agenda for scholars.

The main themes are related to tourists' *risk perception* and *travel intention* (see Table I). In this cluster it is highlighted that different events, such as Brexit, the financial crises or the COVID-19 pandemic, affect destinations' image and tourists' perception of risk, and therefore, their travel intention. Effective *crisis communication* is an initiative that DMOs may use to modify consumers' behaviour towards a destination during a crisis (Pappas, 2021) but customer experience, satisfaction and loyalty should also be considered in these strategies to minimise tourists' perceived risk (Pappas and Glyptou, 2021).

The motivations of travellers during crises and in a post-crisis era varies from a pre-crisis state, as previous travel experience is not a decisive variable and travel costs are more frequently considered (Pappas, 2019) . Therefore, offering value-for-money products and services and the strengthening of destination image are relevant factors deemed to boost intention to travel (Pappas, 2019). Variables such as age, income or the psychological impact of the COVID-19 crisis also influence the tourists' risk perception and their future travel intention in a post-pandemic scenario (Pappas, 2021).

Research agenda

The research agenda proposed in this study is constituted by the emerging themes resulting from cluster 3 and 4 of the bibliographic coupling. The agenda aims to facilitate to researchers key topics for future investigation of destinations' image crisis communication. These directions for future research are based on two main issues: the scope of crisis communication to reduce risk perception and to encourage tourists' travel intention and post- crisis marketing communication strategies (see Table VI).

[Table VI]

Discussion and conclusion

Tourism is one of the sectors most negatively affected by crises or disasters. These events can occur at any time and may severely affect all stakeholders in this industry and destinations' image. In the last five years, and especially since the COVID-19 pandemic outbreak in 2020, the TCDM academic literature was focused on the models used to counter these adverse effects at the different stages of a crisis or a disaster. Despite crisis communication being considered a critical factor for management strategies for destinations' image, the previous bibliometric academic literature in TCDM was not specifically focused on it. The bibliographic coupling in this study addresses this knowledge gap as it is the first precisely to centre on communication for destinations' image in TCDM.

Prior reviews of TCDM, for example Mair et al., (2016), advanced some of the key themes of crisis communication. This study included the relevance of media in communication strategies to restore destinations' image in a post-disaster or post-crisis era. However, the study did not contemplate the communication developed during the other phases of crises and disasters. Wut *et al*., (2021) considered risk communication and digital media to be less explored contexts in the crisis management field, but their research focused on hospitality and tourism industry, and destinations' image was not analysed.

The data provided by this bibliographic coupling present a detailed overview of crisis communication for destinations' image from 2017 to 2021 (both years included). Regarding scientific production, Avraham, E., with seven papers, is the most prolific author, while China has the highest output per country, with 71 published articles. The dynamics in the type of crisis addressed, in the authors' keywords, and in trending topics enhance the relevance of the COVID-19 pandemic among other recent crises and disasters. For example, prior to 2019, health crises were seldom considered in this field, however, in 2021, 36 out of 45 papers were focused on the pandemic. Natural disasters and marketing strategies were trending topics in 2017, though in

2021, 'COVID-19' and 'sustainable tourism' were more common. The *h-Classic* classification is also headed by an article focused on the type and scale of the impacts of the pandemic in the tourism industry (Sigala, 2020) . These results complement the previous studies in TCDM focused on destinations' recovery, such as the one of Duan *et al.*, (2021), based on papers dated until 2020.

Besides, this methodology presents the 'research fronts'- the most updated topics- (clusters 1 and 2), and emerging themes for future investigation- that constitute a research agenda for scholars- (clusters 3 and 4). Both topics may be useful for DMOs communication strategies for destinations' image recovery in a post-COVID-19 scenario or for future crises or disasters. These issues were in-depth analysed and corroborated with a qualitative thematic analysis and provide the answers to the research questions proposed in this study.

The 'research fronts' in this paper are related to the communication of the concept of 'safety' to tourists, the role of the media, and the collaboration of tourism stakeholders to create destinations' resilience in crisis communication. The findings indicate that, during the pandemic, the sensation of lack of safety and the risk of death made the role of the media in communication strategies become essential (Chemli *et al.*, 2021). Destinations' image repair strategies developed by DMOs are encouraged to use a combination of traditional media, social media, and their own websites (Bhati *et al.*, 2021) to communicate messages related to health safety (Li *et al.*, 2020). These results confirm the findings of previous TCDM literature, such as the bibliometric study of (Ritchie and Jiang, 2019), that enhanced the role of media in communication recovery strategies for the tourism sector. A systematic review by (Mair *et al.*, 2016), also highlighted a need to repeat the concept of 'safety' in these strategies after a disaster to reinforce the image of destinations as both attractive and safe. In addition, as the results of this analysis are focused on

destinations, they complement other research in this discipline, that were limited to organisations in the hospitality and tourism industry (Wut *et al.*, 2021).

Regarding resilience, prior bibliometric studies in TCDM considered it as a new research focus for tourism organisations (Jiang, Ritchie and Verreynne, 2019) . This study amplifies this scope, since resilience is widely analysed centred on destinations, and the collaboration that is required from the stakeholders in tourism industry to create it and to involve residents in this creation process through social media communication strategies (Liu-Lastres and Cahyanto, 2021). The research also coincides with real time response (RTR), a smart strategic system approach that proposes smarter coordination of stakeholders to improve disaster response and, therefore, to generate destinations' resilience (Bethune *et al.*, 2022).

The emerging themes in this study provide a research agenda for academics in a post COVID-19 scenario. These topics are related to the post-crisis marketing communication strategies and the relevance of crisis communication to reduce tourists' perception of risk to boost future travel intention towards destinations' images damaged by a crisis or disaster.

Marketing communications strategies developed during the COVID-19 changed, as they were mainly focused on the messages, instead of audiences or sources (Avraham, 2021b), compared with previous crises or disasters e.g. Avraham and Ketter, (2017). The research agenda in this study proposes topics for future investigation. These include, among others, testing the validity of these strategies in the current post-pandemic era, if they should continue to be safe-COVID-19 destinations message-based, or if their messages should contemplate the new demands of tourists related to sustainable and less overpopulated destinations or shift back to 'business as usual' models used before this crisis (Hall *et al.*, 2020).

Another emerging theme in this research is the scope of crisis communication to reduce tourists' risk perception and boost travel intention. To achieve this goal, the content of messages is

centred on the diminution of risk perception to restore the damaged destination images and encourage tourists to travel in a post-crisis scenario (Pappas, 2021). The research agenda arises questions related to the variables affecting risk perception, such us previous travel experience or travel costs, if they still preserve their influence in the current post-pandemic scenario or if the new ones emerged from the particular characteristics of the crisis- globalisation, duration...- should also be considered.

Therefore, these findings corroborate the results of previous bibliometric studies or reviews in TCDM that highlighted the relevance of marketing communication campaigns for destinations' image recovery (Mair *et al.*, 2016). The findings also enhanced the decisive role of subjective perceived risk to modify tourists' travel intention and behaviour, and the need to analyse the risk perception variables to deepen the understanding of the impacts of crises and disasters (Ritchie and Jiang, 2019) .

Theoretical implications

The theoretical implications of this research are based on the emerging themes provided by the bibliographic coupling methodology and were used to develop a research agenda. Therefore, new issues of future investigation for scholars of crisis communication for destinations' image will emerge from this agenda (see Table IV).

These topics are related, among others, to the real scope of crisis communication strategies to reduce risk perception to boost travel intention. It could be also analysed the relevance of other factors affecting tourists' risk perception beyond communication in these strategies (e.g., previous travel experience, costs or personal or social circumstances), or the new variables resulting from the characteristics of COVID-19 pandemic (e.g., globalisation or duration). The new marketing communication strategies emerged during COVID-19 pandemic, which were different

to those used in past crises and disasters, or if these models have remained useful in the current post-crisis era or for future events are another topics for upcoming research.

Practical implications

The topics obtained by the bibliographic analysis provide guidelines that could be useful for DMOs to develop crisis communications strategies. These strategies may alleviate damage to destinations' images in future events or in a post-crisis or post-disaster scenario. These issues are related to the learnings from past strategies, especially those established during the COVID-19 pandemic, and to the emerging themes for future investigation.

In this respect, DMOs should consider if stakeholders' collaborative communication models with tourism private and public agents and residents that contributed to create destinations' resilience in the past are equally effective in the present post-crisis era. It may also help to assess if crisis communication measures adopted conjointly with governments and policy makers to assist tourists and residents and reactivate tourism activity are also valid for future events.

Marketing communication strategies have shifted compared to previous crises or disasters, due to the specific characteristics of the COVID-19 pandemic (e.g. globalisation, lockdowns, duration, development in the post-digital era..). DMOs should contemplate their validity in the current post-crisis stage to reduce risk perception and heighten tourists' travel intention. Destinations could opt to maintain safety message-based models, disseminated through traditional media and online channels to target different audiences. Others may choose to return to 'business as usual' strategies from the time before the crisis. DMOs may also consider the introduction of messages related to the new demands of the tourists that have emerged from the pandemic in future crisis communication strategies. Tourists' demand tends to be more focused on less crowded and more sustainable destinations.

Limitations and future research

Some of the limitations of this research are related to the research approach: keyword search criteria, the use of a single data base (WoS), and a set period of time (from 2017 to 2021, both years included). The academic literature analysed in the study is reasonably representative of the most relevant studies about crisis communication for destinations' image in this time frame. However, the conclusions of the study are limited in scope, as 'the research fronts' are based on the most recent research findings in this field and lacked the contribution of those studies undertaken prior to 2017.

Bibliographic coupling also has inherent limitations in relation to the detection of 'research fronts'. This is despite its capacity to outperform other bibliometric techniques such as co-citation or direct citation (Boyack and Klavans, 2010). Future investigations utilising both bibliometric methods, improving the methodology used in this study and the use of other citation indexes, for example Scopus, would help to increase the number of papers capable of contributing to the identification of 'research fronts'.

Moreover, future research in this field can be based on the themes proposed in the research agenda for a post-COVID-19 scenario or future crises and disasters: if crisis communication have the capacity to diminish tourists' risk perception and influence travel intention or the effectiveness in the current post crisis era of the new marketing communication models that have arisen during the COVID-19 pandemic. Research could also explore how the collaborative campaigns developed during this crisis are equally operative to create destinations' resilience once the event is over.

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